(54) Title: NUCLEIC ACIDS, PROTEINS, AND ANTIBODIES

(57) Abstract: The present invention relates to novel immune/hematopoietic-related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "immune/hematopoietic antigens", and the use of such immune/hematopoietic antigens for detecting immune/hematopoietic-related diseases and/or disorders, particularly the presence of cancer and cancer metastases of cells of hematopoietic origin. More specifically, isolated immune/hematopoietic associated nucleic acid molecules are provided encoding novel immune/hematopoietic associated polypeptides. Novel immune/hematopoietic polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human immune/hematopoietic associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the immune system or cells and tissues associated with hematopoiesis, including cancers of cells of hematopoietic origin, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

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Nucleic Acids, Proteins, and Antibodies

[001]   This application refers to a "Sequence Listing" that is provided only on electronic media in computer readable form pursuant to Administrative Instructions Section 801(a)(i). The Sequence Listing forms a part of this description pursuant to Rule 5.2 and Administrative Instructions Sections 801 to 806, and is hereby incorporated in its entirety.

[002]   The Sequence Listing is provided as an electronic file (PC004PCT_seqList.txt, 76,977,474 bytes in size, created on January 16, 2001) on four identical compact discs (CD-R), labeled "COPY 1," "COPY 2," "COPY 3," and "CRF." The Sequence Listing complies with Annex C of the Administrative Instructions, and may be viewed, for example, on an IBM-PC machine running the MS-Windows operating system by using the V viewer software, version 2000 (see World Wide Web URL: http://www.fileviewer.com).

Field of the Invention

[003]   The present invention relates to novel immune system and hematopoietic related (herein "immune/hematopoietic") polynucleotides, the polypeptides encoded by these polynucleotides herein collectively referred to as "immune/hematopoietic antigens," and antibodies that immunospecifically bind these polypeptides, and the use of such immune/hematopoietic polynucleotides, antigens, and antibodies for detecting, treating, preventing and/or prognosing disorders of the immune system, including, but not limited to, the presence of cancer and cancer metastases of cells of hematopitic origin. More specifically, isolated immune/hematopoietic nucleic acid molecules are provided   encoding   novel   immune/hematopoietic   polypeptides.   Novel

immune/hematopoietic polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human immune/hematopoietic polynucleotides, polypeptides, and/or antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to hematopoiesis and the immune system, including cancers of cells of hematopoietic origins, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions for inhibiting or promoting the production and/or function of the polypeptides of the invention.

Background of the Invention

[004]   The immune system is an intricate network composed of cells, tissues and soluble substances that function to protect the body from invasion by foreign substances and pathogens. The major cells of the immune system are white blood cells, including lymphocytes, such as B cells and T cells, and myeloid cells, such as basophils, eosinophils, neutrophils, mast cells, monocytes, macrophages and dendritic cells. The soluble components of the immune system, are molecules (often polypeptides) that are not contained within cells, but rather are found in extracellular fluids such as lymph and blood plasma. Some of the major soluble substances are antibodies, complement proteins, and cytokines.

[005]   Cells of the immune system (as well as red blood cells and platelets) are derived from a common precursor stem cell by a process known as hematopoiesis. During fetal life hematopoiesis occurs in the liver and spleen, but in the adult, hematopoiesis occurs mainly in bone marrow. The stem cells from which all blood cells are derived proliferate and differentiate into the various blood cell lineages, (e.g., lymphocytes (B or T cells), myeloid cells (basophils, eosinophils, neutrophils, mast cells, macrophages), platelets, or red blood cells) in response to signals received from other cells (e.g., stromal cells) in the bone marrow microenvironment and also from cytokines. Many of the cytokines that promote the growth and differentiation of

hematopoietic stem cells are known as "colony stimulating factors". For example, interleukin-3 (IL-3, and also known as multi-colony stimulating factor) and granulocyte macrophage colony stimulationg factor (GM-CSF), which are released by activated macrophages T cells, stimulate the production of macrophages and granulocytes (myelopoiesis). Stem cell factor (SCF, c-kit ligand) is a growth factor for primitive lymphoid and myeloid hematopoietic bone marrow progenitor cells expressing the early cell surface marker CD34. Other hematopoeitic cytokines/growth factors include, but are not limited to macrophage colony stimulating factor (M-CSF) and granulocyte colony stimulating factor (G-CSF). Interleukins-1, 6, and 7 have also been shown to function as hematopoietic growth factors/cytokines.

[006]   The maturation of lymphocytes has an added layer of complexity in that each individual T and B cell generates a unique antigen specific receptor – a B cell receptor (antibody) in the case of B cells or a T cell receptor in the case of T cells . Because it is possible that B and T cells may generate autoreactive antigen receptors, B and T cells undergo negative selection processes that eliminate autoreactive lymphocytes from the circulating pool of mature lymphocytes. Defects in negative selection may contribute to the occurrence of autoimmune disease. In addition, T cells undergo a process of positive selection in which T cells are selected for their ability to interact with the major histocompatibility antigens. In the thymus, T cells also differentiate into one of two classes, CD4+ T helper (Th) cells or CD8+ cytotoxic T cells. The majority of the maturation and selection procees occurs in the bone marrow for B cells, whereas T cell progenitor cells migrate from the bone marrow to the thymus where they complete their maturation.

[007]   Cells of the immune system circulate throughout the body in both the lymph and the blood. Immune cells will leave the circulatory system and enter the tissues by a process known as diapedesis. Immune cells return to the circulatory system via travel in the lymph. Situated along the lymphatic vessels are lymph nodes, which are small nodular aggregates of lymphoid tissues. The architecture of the lymph node is designed to facilitate acquired immune responses, with antigen presenting cells, B cells and T cells all in close proximity. Antigen presenting cells (APCs, e.g., dendritic cells, macrophages, B cells) display antigen on their surface in the form of peptides associated MHC class II molecules to T helper cells. T helper cells with T-cell

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receptors specific for the given antigen become activated if they bind to the peptide MHC complexes and receive co-stimulatory signals (e.g, stimulation of CD28 on the Tcell by B7 molecules on the APC). Activated T helper cells proliferate, secreted cytokines, and can stimulate antigen-specific B cells or T cells to become activated. Once activated, cytotoxic T cells proliferate and are able to induce apoptosis of cells expressing specific antigen on their surface as a peptide in the context of MHC Class I molecules. Activated B cells also proliferate and may either enter into germinal center and undergo a process of affinity maturation of their antigen receptor, or differentiate into antibody forming cells (plasma cells) that secrete large quantities of antigen-specific antibody.

[008]   Aside from lymphocytes and antigen presenting cells, introduced above, there are several other accessory cells in the immune system including neutrophils, eosinophils, basophils, mast cells, and Natural Killer (NK) cells. NK cells are large granular lymphocytes that have cytotoxic function, especially against cells infected with intracellular pathogens, and may function in the eradication of cancer cells. Neutrophils are phagocytic cells that play a key role in the inflammatory process. Activated mast cells release granules containing histamine and other active agents which are effective against large parasites and also contribute to allergic reactions and asthma. Eosinophils bear Fc receptors for IgG and IgE, and participate in the killing of antibody coated parasites.

[009]   The immune system can be classified into the acquired and innate immune system. The cells of the innate immune system (e.g., neutrophils, eosinophils, basophils, mast cells) are not antigen specific and their action is not enhanced by repeated exposure to the same antigen. The cells of the acquired immune system (B and T cells) are antigen specific and repeated exposure of B and T cells to an antigen results in improved immune repsonses (memory responses) produced by these cell types. The cells and products of the acquired immune system can function to focus the action of the innate immune system. For example, eosinophils are not in themselves antigen specific, but as a result of expression of Fc receptors on their surface, their activity can be focused on a specific antigen to which an antibody response has been made by the acquired immune system. For a more extensive review of the immune

system, see *Fundamental Immunology* , 4th edition, ed. William Paul, Lippincott-Raven Pub. (1998).

[010]   As illustrated above, an immune response is seldom carried out by a single cell type, but rather requires the coordinated efforts of several cell types. In order to coordinate an immune response, it is necessary that cells of the immune system communicate with each other and with other cells of the body. Communication between cells may be made by cell-cell contact, between membrane bound molecules on each cell, or by the interaction of soluble components of the immune system with cellular receptors. Usually, such receptors are embedded in the plasma membrane, but there also exist a subset of cytoplasmic and nuclear receptors. Communication, or signaling, between cell types may have one or more of a variety of consequences including, activation, proliferation, differentiation, or apoptosis. Activation and differentiation may result in the expression or secretion of polypeptides, or other molecules, which in turn affect the function of other cells and/or molecules of the immune system.

[011]   Signaling molecules of the immune system, including not only cellular receptors and ligands, but also the downstream effectors of the receptors and/or ligands, may be described as immunomodulators. In addition, immunomodulators (also known as biological response modifiers) include microbial or synthetic substances and products of activated cells. The mechanism of action of immunomodulators usually involves a complicated interplay of various regulator and effector systems. Immunomodulators may enhance (immunoprophylaxis, immunostimulation), restore (immunosubstitution, immunorestoration) or suppress (immunosuppression, immunodeviation) immunological functions or activities. Immunomodulators may be, for example, cytokines, cytokine receptors, inhibitors of DNA synthesis, intacellular receptors, or components of signal transduction pathways, some of which are described in more detail below:

Cytokines and Cytokine Receptors

[012]   Cytokines are small soluble proteins produced by one cell that alter the behavior or other properties of another cell or itself. Thus, by definition, cytokines are immunomodulatory molecules. Many cytokines have multiple biological effects and

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are critical to the regulation of the immune response. For a review on cytokines, refer to Chapter 11 of *Cellular and Molecular Immunology* by Abbas et al. (1991).

[013]   Immune responses of the acquired immune system can be classified into two broad classes of immune responses: humoral (antibody-mediated) immune responses and cell-mediated immune responses (cell-mediated, i.e., cytotoxic T cell, immune response). Both types of responses require activation of CD4+ T helper cells. Depending on several factors, of which one factor is the cytokine environment, T helper (Th) cells may differentiate into either Th1 cells that promote cell-mediated responses or Th2 cells that promote humoral responses. Th1 cells, which produce interferon (IFN)-gamma, interleukin (IL)-2 and tumor necrosis factor (TNF)-beta, evoke cell-mediated immunity and phagocyte-dependent inflammation. Th2 cells, which produce IL-4, IL-5, IL-6, IL-9, IL-10, and IL-13, evoke strong antibody responses (including those of the IgE class) and eosinophil accumulation, but inhibit several functions of phagocytic cells (phagocyte-independent inflammation). The presence of Th1 or Th2 T cells can have a dramatic effect on the outcome of infection. A Th1 response during the course of infection by the intracellular bacterium *mycobacterium leprae (M. leprae)* is protective, whereas a Th2 response is much less so. Patients that make Th2 response to M. leprae develop full-blown lepromatous leprosy which is eventually fatal. The (mis)regulation of Th1 and Th2 responses have been implicated in the pathogenesis of several diseases, including several organ-specific autoimmune disorders such as Crohn's disease, sarcoidosis, acute kidney allograft rejection, some unexplained recurrent abortions. For a review on Th1 and Th2 subsets, see Romagnani, *Ann. Allergy Asthma Immunol.* 85:9-18 (2000).

[014]   From the preceding example it is apparent that cytokines have play key roles on the class and effectiveness of the immune response. It is important to note that cytokines have effects on cell of both the innate and acquired immune systems and are produced by both immune and non-immune cells types.

[015]   Other cytokines such as interferon-alpha (secreted by leukocytes) and interferon–beta (secreted by fibroblasts and many other cell types) are cytokines that function to target the immune system towards fighting viral infections. The binding of interferon-alpha and -beta to cells results in a cellular signalling cascade which ultimately results in the inhibition of viral replication in infected cells, the upregulation

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of MHC class I expression on cells, and the activation of Natural Killer (NK) cells. Interferons are useful in the diagnosis, treatment and prevention of viral infections and cancers.

Intracellular immunomodulators.

[016]   Immunomodulatory proteins are not only cytokines or cytokine receptors. They may also be located intracellularly. For, example they may be intracellular components of a signaling pathway, or even intracellular receptors for certain signaling molecules such as steroids. One example of intracellular immunomodulatory proteins are the immunophilins such as cyclophilin and FK binding protein (FKBP). These immunophilins are peptidyl-prolyl cis-trans isomerases, though their enzymatic ability may be distinct from their role as immunomodulators. When these molecules are bound by the drugs, Cyclosporin A and FK506, respectively, they in turn inhibit the action of activated calcineurin. Calcineurin is a calcium activated serine/threonine kinase which dephosphorylates the transcription factor Nuclear Factor of Activated T cells (NF-AT). Upon dephosphorylation, NF-AT enters the nucleus and induces the transcription of several genes including IL-2. In sum, the immunophilin:drug complexes are able to inhibit clonal expansion of T cells by inhibiting IL-2 synthesis. In addition, FKBP when bound to another drug, rapamycin, can also inhibit the signaling of IL-2 through the IL-2 receptor. FKBP:rapamycin complexes accomplish the inhibition of IL-2 signaling not by binding to calcineurin, but by binding to and inactivating the protein kinases associated with IL-2 signaling resulting in the same outcome, the inhibition of T cell clonal expansion.

[017]   Defects in any one or more of the components of the immune system can lead to diseaseor susceptibility to infectious diseases. Two major classes of immune system disorders are autoimmune diseases, and immunodeficiencies. In autoimmunity, the effector mechanisms of the immune system (e.g., antigen specific antibodies and cellular cytotoxicity, e.g., of cytotoxic T cells, or natural killer cells) are misdirected at self rather than foreign antigens resulting is tissue distruction. Diseases classified as or associated with immunodeficiencies are diseases in which the immune system is unable to mount an effective immune response. A classic example of an immunodeficiecy is X-linked agammaglobulinemia in which an intracellular

signalling molecule expressed in B lymphocytes (Bruton's tyrosine kinase) is defective. The loss of function of this kinase prevents B cell maturation, thus patients with X linked agammaglobulinemia do not have mature B cells and are unable to make antibody, and as a result are susceptible to infection.

[018]   The discovery of new human immune/hematopoietic polynucleotides, the polypeptides encoded by them, and antibodies that immunospecifically bind these polypeptides, satisfies a need in the art by providing new compositions which are useful in the diagnosis, treatment, prevention and/or prognosis of disorders of the immune system, including, but not limited to, autoimmune disorders, (e.g., systemic lupus erythematosus, rheumatoid arthritis, idiopathic thrombocytopenic purpura and multiple sclerosis) and immunodeficiencies (e.g., X-linked agammaglobulinemia, severe combined immunodeficiency, Wiskott-Aldrich syndrome, and ataxia telangiectasia). Additionally, immune/hematopoietic molecules would be useful as agents to boost immune responsiveness to pathogens or to suppress immune reactions, for example as is necessary in conjunction with organ transplantation.

Summary of the Invention

[019]   The present invention relates to novel immune/hematopoietic related polynucleotides, the polypeptides encoded by these polynucleotides herein collectively referred to as "immune/hematopoietic antigens," and antibodies that immunospecifically bind these polypeptides, and the use of such immune/hematopoietic polynucleotides, antigens, and antibodies for detecting, treating, preventing and/or prognosing disorders of the immune system, including, but not limited to, the presence of cancer and cancer metastases of cells of hematopoietic origin. More specifically, isolated immune/hematopoietic nucleic acid molecules are provided encoding novel immune/hematopoietic polypeptides. Novel immune/hematopoietic polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human immune/hematopoietic polynucleotides, polypeptides, and/or antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the immune system or hematopoitic cells or tisues, including cancers of cells of

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hematopoietic origin, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions for inhibiting or promoting the production and/or function of the polypeptides of the invention.

Detailed Description

Tables

[020]   Table 1A summarizes some of the polynucleotides encompassed by the invention (including cDNA clones related to the sequences (Clone ID NO:Z), contig sequences (contig identifier (Contig ID:) and contig nucleotide sequence identifier (SEQ ID NO:X)) and further summarizes certain characteristics of these polynucleotides and the polypeptides encoded thereby. The first column provides a unique clone identifier, "Clone ID NO:Z", for a cDNA plasmid related to each immune/hematopoietic associated contig sequence disclosed in Table 1A. The second column provides a unique contig identifier, "Contig ID:" for each of the contig sequences disclosed in Table 1A. The third column provides the sequence identifier, "SEQ ID NO:X", for each of the contig polynucleotide sequences disclosed in Table 1A. The fourth column, "ORF (From-To)", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence of SEQ ID NO:X that delineate the preferred open reading frame (ORF) shown in the sequence listing and referenced in Table 1A as SEQ ID NO:Y (column 5). Column 6 lists residues comprising predicted epitopes contained in the polypeptides encoded by each of the preferred ORFs (SEQ ID NO:Y). Identification of potential immunogenic regions was performed according to the method of Jameson and Wolf (CABIOS, 4:181-186 (1988)); specifically, the Genetics Computer Group (GCG) implementation of this algorithm, embodied in the program PEPTIDESTRUCTURE (Wisconsin Package v10.0, Genetics Computer Group (GCG), Madison, Wisc.). This method returns a measure of the probability that a given residue is found on the surface of the protein. Regions where the antigenic index score is greater than 0.9 over at least 6 amino acids are indicated in Table 1A as "Predicted Epitopes." In particular embodiments, immune/hematopoietic associated polypeptides of the invention comprise, or

alternatively consist of, one, two, three, four, five or more of the predicted epitopes described in Table 1A. It will be appreciated that depending on the analytical criteria used to predict antigenic determinants, the exact address of the determinant may vary slightly. Column 7, "Tissue Distribution" shows the expression profile of tissue, cells, and/or cell line libraries which express the polynucleotides of the invention. The first number in column 7 (preceding the colon), represents the tissue/cell source identifier code corresponding to the code and description provided in Table 4. Expression of these polynucleotides was not observed in the other tissues and/or cell libraries tested. For those identifier codes in which the first two letters are not "AR", the second number in column 7 (following the colon) represents the number of times a sequence corresponding to the reference polynucleotide sequence (e.g., SEQ ID NO:X) was identified in the tissue/cell source. Those tissue/cell source identifier codes in which the first two letters are "AR" designate information generated using DNA array technology. Utilizing this technology, cDNAs were amplified by PCR and then transferred, in duplicate, onto the array. Gene expression was assayed through hybridization of first strand cDNA probes to the DNA array. cDNA probes were generated from total RNA extracted from a variety of different tissues and cell lines. Probe synthesis was performed in the presence of ^{33}P dCTP, using oligo(dT) to prime reverse transcription. After hybridization, high stringency washing conditions were employed to remove non-specific hybrids from the array. The remaining signal, emanating from each gene target, was measured using a Phosphorimager. Gene expression was reported as Phosphor Stimulating Luminescence (PSL) which reflects the level of phosphor signal generated from the probe hybridized to each of the gene targets represented on the array. A local background signal subtraction was performed before the total signal generated from each array was used to normalize gene expression between the different hybridizations. The value presented after "[array code]:" represents the mean of the duplicate values, following background subtraction and probe normalization. One of skill in the art could routinely use this information to identify normal and/or diseased tissue(s) which show a predominant expression pattern of the corresponding polynucleotide of the invention or to identify polynucleotides which show predominant and/or specific tissue and/or cell expression. Column 8, "Cytologic Band," provides the chromosomal location of polynucleotides

corresponding to SEQ ID NO:X. Chromosomal location was determined by finding exact matches to EST and cDNA sequences contained in the NCBI (National Center for Biotechnology Information) UniGene database. Given a presumptive chromosomal location, disease locus association was determined by comparison with the Morbid Map, derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM™. McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine (Bethesda, MD) 2000. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/). If the putative chromosomal location of the Query overlapped with the chromosomal location of a Morbid Map entry, an OMIM identification number is provided in Table 1A, column 9 labeled "OMIM Disease Reference(s)". A key to the OMIM reference identification numbers is provided in Table 5.

[021]   Table 1B summarizes additional polynucleotides encompassed by the invention (including cDNA clones related to the sequences (Clone ID NO:Z), contig sequences (contig identifier (Contig ID:) contig nucleotide sequence identifiers (SEQ ID NO:X)), and genomic sequences (SEQ ID NO:B). The first column provides a unique clone identifier, "Clone ID NO:Z", for a cDNA clone related to each contig sequence. The second column provides the sequence identifier, "SEQ ID NO:X", for each contig sequence. The third column provides a unique contig identifier, "Contig ID:" for each contig sequence. The fourth column, provides a BAC identifier "BAC ID NO:A" for the BAC clone referenced in the corresponding row of the table. The fifth column provides the nucleotide sequence identifier, "SEQ ID NO:B" for a fragment of the BAC clone identified in column four of the corresponding row of the table. The sixth column, "Exon From-To", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence of SEQ ID NO:B which delineate certain polynucleotides of the invention that are also exemplary members of polynucleotide sequences that encode polypeptides of the invention (e.g., polypeptides containing amino acid sequences encoded by the polynucleotide sequences delineated in column six, and fragments and variants thereof).

[022]   Table 2 summarizes homology and features of some of the polypeptides of the invention. The first column provides a unique clone identifier, "Clone ID NO:Z",

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corresponding to a cDNA disclosed in Table 1A. The second column provides the unique contig identifier, "Contig ID:" corresponding to contigs in Table 1A and allowing for correlation with the information in Table 1A. The third column provides the sequence identifier, "SEQ ID NO:X", for the contig polynucleotide sequences. The fourth column provides the analysis method by which the homology/identity disclosed in the row was determined. Comparisons were made between polypeptides encoded by the polynucleotides of the invention and either a non-redundant protein database (herein referred to as "NR"), or a database of protein families (herein referred to as "PFAM") as further described below. The fifth column provides a description of PFAM/NR hits having significant matches to a polypeptide of the invention. Column six provides the accession number of the PFAM/NR hit disclosed in the fifth column. Column seven, "Score/Percent Identity", provides a quality score or the percent identity, of the hit disclosed in column five. Columns 8 and 9, "NT From" and "NT To" respectively, delineate the polynucleotides in "SEQ ID NO:X" that encode a polypeptide having a significant match to the PFAM/NR database as disclosed in the fifth column. In specific embodiments, polypeptides of the invention comprise, or alternatively consist of, an amino acid sequence encoded by the polynucleotides in SEQ ID NO:X as delineated in columns 8 and 9, or fragments or variants thereof.

[023]   Table 3 provides polynucleotide sequences that may be disclaimed according to certain embodiments of the invention. The first column provides a unique clone identifier, "Clone ID NO:Z", for a cDNA clone related to immune/hematopoietic associated contig sequences disclosed in Table 1A. The second column provides the sequence identifier, "SEQ ID NO:X", for contig polynucleotide sequences disclosed in Table 1A. The third column provides the unique contig identifier, "Contig ID", for contigs disclosed in Table 1A. The fourth column provides a unique integer 'a' where 'a' is any integer between 1 and the final nucleotide minus 15 of SEQ ID NO:X, represented as "Range of a", and the fifth column provides a unique integer 'b' where 'b' is any integer between 15 and the final nucleotide of SEQ ID NO:X, represented as "Range of b", where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:X, and where b is greater than or equal to a + 14. For each of the polynucleotides shown as SEQ ID NO:X, the uniquely defined integers can be substituted into the general formula of a-b, and used to describe polynucleotides which

may be preferably excluded from the invention. In certain embodiments, preferably excluded from the polynucleotides of the invention (including polynucleotide fragments and variants as described herein and diagnostic and/or therapeutic uses based on these polynucleotides) are at least one, two, three, four, five, ten, or more of the polynucleotide sequence(s) having the accession number(s) disclosed in the sixth column of this Table (including for example, published sequence in connection with a particular BAC clone). In further embodiments, preferably excluded from the invention are the specific polynucleotide sequence(s) contained in the clones corresponding to at least one, two, three, four, five, ten, or more of the available material having the accession numbers identified in the sixth column of this Table (including for example, the actual sequence contained in an identified BAC clone).

[024]   Table 4 provides a key to the tissue/cell source identifier code disclosed in Table 1A, column 7. Column 1 provides the key to the tissue/cell source identifier code disclosed in Table 1A, Column 7. Columns 2-5 provide a description of the tissue or cell source. Codes corresponding to diseased tissues are indicated in column 6 with the word "disease". The use of the word "disease" in column 6 is non-limiting. The tissue or cell source may be specific (e.g. a neoplasm), or may be disease-associated (e.g., a tissue sample from a normal portion of a diseased organ). Furthermore, tissues and/or cells lacking the "disease" designation may still be derived from sources directly or indirectly involved in a disease state or disorder, and therefore may have a further utility in that disease state or disorder. In numerous cases where the tissue/cell source is a library, column 7 identifies the vector used to generate the library.

[025]   Table 5 provides a key to the OMIM™ reference identification numbers disclosed in Table 1A, column 9. OMIM reference identification numbers (Column 1) were derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM™. McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine, (Bethesda, MD) 2000. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/). Column 2 provides diseases associated with the cytologic band disclosed in Table 1A, column 8, as determined from the Morbid Map database.

[026]   Table 6 summarizes ATCC Deposits, Deposit dates, and ATCC designation numbers of deposits made with the ATCC in connection with the present application.

[027]   Table 7 shows the cDNA libraries sequenced, tissue source description, vector information and ATCC designation numbers relating to these cDNA libraries.

[028]   Table 8 provides a physical characterization of clones encompassed by the invention. The first column provides the unique clone identifier, "Clone ID NO:Z", for certain cDNA clones of the invention, as described in Table 1A. The second column provides the size of the cDNA insert contained in the corresponding cDNA clone.

Definitions

[029]   The following definitions are provided to facilitate understanding of certain terms used throughout this specification.

[030]   In the present invention, "isolated" refers to material removed from its original environment (e.g., the natural environment if it is naturally occurring), and thus is altered "by the hand of man" from its natural state. For example, an isolated polynucleotide could be part of a vector or a composition of matter, or could be contained within a cell, and still be "isolated" because that vector, composition of matter, or particular cell is not the original environment of the polynucleotide. The term "isolated" does not refer to genomic or cDNA libraries, whole cell total or mRNA preparations, genomic DNA preparations (including those separated by electrophoresis and transferred onto blots), sheared whole cell genomic DNA preparations or other compositions where the art demonstrates no distinguishing features of the polynucleotide sequences of the present invention.

[031]   As used herein, a "polynucleotide" refers to a molecule having a nucleic acid sequence encoding SEQ ID NO:Y or a fragment or variant thereof, a nucleic acid sequence contained in SEQ ID NO:X (as described in column 3 of Table 1A) or the complement thereof, a cDNA sequence contained in Clone ID NO:Z (as described in column 1 of Table 1A and contained within a library deposited with the ATCC); a nucleotide sequence encoding the polypeptide encoded by a nucleotide sequence in SEQ ID NO:B as defined in column 6 of Table 1B or a fragment or variant thereof; or a nucleotide coding sequence in SEQ ID NO:B as defined in column 6 of Table 1B or

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the complement thereof. For example, the polynucleotide can contain the nucleotide sequence of the full length cDNA sequence, including the 5' and 3' untranslated sequences, the coding region, as well as fragments, epitopes, domains, and variants of the nucleic acid sequence. Moreover, as used herein, a "polypeptide" refers to a molecule having an amino acid sequence encoded by a polynucleotide of the invention as broadly defined (obviously excluding poly-Phenylalanine or poly-Lysine peptide sequences which result from translation of a polyA tail of a sequence corresponding to a cDNA).

[032]   As used herein, a "immune/hematopoietic antigen" refers collectively to any polynucleotide disclosed herein (e.g., a nucleic acid sequence contained in SEQ ID NO:X or the complement therof, or cDNA sequence contained in Clone ID NO:Z, or a nucleotide sequence encoding the polypeptide encoded by a nucleotide sequence in SEQ ID NO:B as defined in column 6 of Table 1B, or a nucleotide coding sequence in SEQ ID NO:B as defined in column 6 of Table 1B or the complement thereof and fragments or variants thereof as described herein) or any polypeptide disclosed herein (e.g., an amino acid sequence contained in SEQ ID NO:Y, an amino acid sequence encoded by SEQ ID NO:X, or the complement thereof, an amino acid sequence encoded by the cDNA sequence contained in Clone ID NO:Z, an amino acid sequence encoded by SEQ ID NO:B, or the complement thereof, and fragments or variants thereof as described herein). These immune/hematopoietic antigens have been determined to be predominantly expressed in hematopoietic tissues (e.g., bone marrow, fetal liver, and fetal spleen) or cells and tissues of the immune system (e.g., lymph nodes, spleen, B cells, T cells, monocytes, macrophages, dendritic cells, neutrophils, mast cells, basophils, and eosinophils) including normal or diseased tissues (as shown in Table 1A column 7 and Table 4).

[033]   In the present invention, "SEQ ID NO:X" was often generated by overlapping sequences contained in multiple clones (contig analysis). A representative clone containing all or most of the sequence for SEQ ID NO:X is deposited at Human Genome Sciences, Inc. (HGS) in a catalogued and archived library. As shown, for example, in column 1 of Table 1A, each clone is identified by a cDNA Clone ID (identifier generally referred to herein as Clone ID NO:Z). Each Clone ID is unique to an individual clone and the Clone ID is all the information needed to retrieve a given

clone from the HGS library. Furthermore, certain clones disclosed in this application have been deposited with the ATCC on October 5, 2000, having the ATCC designation numbers PTA 2574 and PTA 2575; and on January 5, 2001, having the depositor reference numbers TS-1, TS-2, AC-1, and AC-2. In addition to the individual cDNA clone deposits, most of the cDNA libraries from which the clones were derived were deposited at the American Type Culture Collection (hereinafter "ATCC"). Table 7 provides a list of the deposited cDNA libraries. One can use the Clone ID NO:Z to determine the library source by reference to Tables 6 and 7. Table 7 lists the deposited cDNA libraries by name and links each library to an ATCC Deposit. Library names contain four characters, for example, "HTWE." The name of a cDNA clone (Clone ID NO:Z) isolated from that library begins with the same four characters, for example "HTWEP07". As mentioned below, Table 1A correlates the Clone ID NO:Z names with SEQ ID NO:X. Thus, starting with an SEQ ID NO:X, one can use Tables 1A, 6 and 7 to determine the corresponding Clone ID NO:Z, which library it came from and which ATCC deposit the library is contained in. Furthermore, it is possible to retrieve a given cDNA clone from the source library by techniques known in the art and described elsewhere herein. The ATCC is located at 10801 University Boulevard, Manassas, Virginia 20110-2209, USA. The ATCC deposits were made pursuant to the terms of the Budapest Treaty on the international recognition of the deposit of microorganisms for the purposes of patent procedure.

[034]   In specific embodiments, the polynucleotides of the invention are at least 15, at least 30, at least 50, at least 100, at least 125, at least 500, or at least 1000 continuous nucleotides but are less than or equal to 300 kb, 200 kb, 100 kb, 50 kb, 15 kb, 10 kb, 7.5 kb, 5 kb, 2.5 kb, 2.0 kb, or 1 kb, in length. In a further embodiment, polynucleotides of the invention comprise a portion of the coding sequences, as disclosed herein, but do not comprise all or a portion of any intron. In another embodiment, the polynucleotides comprising coding sequences do not contain coding sequences of a genomic flanking gene (i.e., 5' or 3' to the gene of interest in the genome). In other embodiments, the polynucleotides of the invention do not contain the coding sequence of more than 1000, 500, 250, 100, 50, 25, 20, 15, 10, 5, 4, 3, 2, or 1 genomic flanking gene(s).

[035]   A "polynucleotide" of the present invention also includes those polynucleotides capable of hybridizing, under stringent hybridization conditions, to sequences contained in SEQ ID NO:X, or the complement thereof (e.g., the complement of any one, two, three, four, or more of the polynucleotide fragments described herein), the polynucleotide sequence delineated in columns 8 and 9 of Table 2 or the complement thereof, and/or cDNA sequences contained in Clone ID NO:Z (e.g., the complement of any one, two, three, four, or more of the polynucleotide fragments, or the cDNA clone within the pool of cDNA clones deposited with the ATCC, described herein) and/or the polynucleotide sequence delineated in column 6 of Table 1B or the complement thereof. "Stringent hybridization conditions" refers to an overnight incubation at 42 degree C in a solution comprising 50% formamide, 5x SSC (750 mM NaCl, 75 mM trisodium citrate), 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 μg/ml denatured, sheared salmon sperm DNA, followed by washing the filters in 0.1x SSC at about 65 degree C.

[036]   Also contemplated are nucleic acid molecules that hybridize to the polynucleotides of the present invention at lower stringency hybridization conditions. Changes in the stringency of hybridization and signal detection are primarily accomplished through the manipulation of formamide concentration (lower percentages of formamide result in lowered stringency), salt conditions, or temperature. For example, lower stringency conditions include an overnight incubation at 37 degree C in a solution comprising 6X SSPE (20X SSPE = 3M NaCl; 0.2M NaH_2PO_4; 0.02M EDTA, pH 7.4), 0.5% SDS, 30% formamide, 100 ug/ml salmon sperm blocking DNA; followed by washes at 50 degree C with 1XSSPE, 0.1% SDS. In addition, to achieve even lower stringency, washes performed following stringent hybridization can be done at higher salt concentrations (e.g. 5X SSC).

[037]   Note that variations in the above conditions may be accomplished through the inclusion and/or substitution of alternate blocking reagents used to suppress background in hybridization experiments. Typical blocking reagents include Denhardt's reagent, BLOTTO, heparin, denatured salmon sperm DNA, and commercially available proprietary formulations. The inclusion of specific blocking reagents may require modification of the hybridization conditions described above, due to problems with compatibility.

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[038]   Of course, a polynucleotide which hybridizes only to polyA+ sequences (such as any 3' terminal polyA+ tract of a cDNA shown in the sequence listing), or to a complementary stretch of T (or U) residues, would not be included in the definition of "polynucleotide," since such a polynucleotide would hybridize to any nucleic acid molecule containing a poly (A) stretch or the complement thereof (e.g., practically any double-stranded cDNA clone generated using oligo dT as a primer).

[039]   The polynucleotide of the present invention can be composed of any polyribonucleotide or polydeoxribonucleotide, which may be unmodified RNA or DNA or modified RNA or DNA. For example, polynucleotides can be composed of single- and double-stranded DNA, DNA that is a mixture of single- and double-stranded regions, single- and double-stranded RNA, and RNA that is mixture of single- and double-stranded regions, hybrid molecules comprising DNA and RNA that may be single-stranded or, more typically, double-stranded or a mixture of single- and double-stranded regions. In addition, the polynucleotide can be composed of triple-stranded regions comprising RNA or DNA or both RNA and DNA. A polynucleotide may also contain one or more modified bases or DNA or RNA backbones modified for stability or for other reasons. "Modified" bases include, for example, tritylated bases and unusual bases such as inosine. A variety of modifications can be made to DNA and RNA; thus, "polynucleotide" embraces chemically, enzymatically, or metabolically modified forms.

[040]   The polypeptide of the present invention can be composed of amino acids joined to each other by peptide bonds or modified peptide bonds, i.e., peptide isosteres, and may contain amino acids other than the 20 gene-encoded amino acids. The polypeptides may be modified by either natural processes, such as posttranslational processing, or by chemical modification techniques which are well known in the art. Such modifications are well described in basic texts and in more detailed monographs, as well as in a voluminous research literature. Modifications can occur anywhere in a polypeptide, including the peptide backbone, the amino acid side-chains and the amino or carboxyl termini. It will be appreciated that the same type of modification may be present in the same or varying degrees at several sites in a given polypeptide. Also, a given polypeptide may contain many types of modifications. Polypeptides may be branched, for example, as a result of

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ubiquitination, and they may be cyclic, with or without branching. Cyclic, branched, and branched cyclic polypeptides may result from posttranslation natural processes or may be made by synthetic methods. Modifications include acetylation, acylation, ADP-ribosylation, amidation, covalent attachment of flavin, covalent attachment of a heme moiety, covalent attachment of a nucleotide or nucleotide derivative, covalent attachment of a lipid or lipid derivative, covalent attachment of phosphotidylinositol, cross-linking, cyclization, disulfide bond formation, demethylation, formation of covalent cross-links, formation of cysteine, formation of pyroglutamate, formylation, gamma-carboxylation, glycosylation, GPI anchor formation, hydroxylation, iodination, methylation, myristoylation, oxidation, pegylation, proteolytic processing, phosphorylation, prenylation, racemization, selenoylation, sulfation, transfer-RNA mediated addition of amino acids to proteins such as arginylation, and ubiquitination. (See, for instance, PROTEINS - STRUCTURE AND MOLECULAR PROPERTIES, 2nd Ed., T. E. Creighton, W. H. Freeman and Company, New York (1993); POSTTRANSLATIONAL COVALENT MODIFICATION OF PROTEINS, B. C. Johnson, Ed., Academic Press, New York, pgs. 1-12 (1983); Seifter et al., Meth. Enzymol. 182:626-646 (1990); Rattan et al., Ann. N.Y. Acad. Sci. 663:48-62 (1992).)

[041]   "SEQ ID NO:X" refers to a polynucleotide sequence described, for example, in Tables 1A or 2, while "SEQ ID NO:Y" refers to a polypeptide sequence described in column 5 of Table 1A. SEQ ID NO:X is identified by an integer specified in column 3 of Table 1A. The polypeptide sequence SEQ ID NO:Y is a translated open reading frame (ORF) encoded by polynucleotide SEQ ID NO:X. "Clone ID NO:Z" refers to a cDNA clone described in column 1 of Table 1A.

[042]   "A polypeptide having biological activity" refers to a polypeptide exhibiting activity similar to, but not necessarily identical to, an activity of a polypeptide of the present invention, including mature forms, as measured in a particular biological assay, with or without dose dependency. In the case where dose dependency does exist, it need not be identical to that of the polypeptide, but rather substantially similar to the dose-dependence in a given activity as compared to the polypeptide of the present invention (i.e., the candidate polypeptide will exhibit greater activity or not more than about 25-fold less and, preferably, not more than about tenfold less activity,

and most preferably, not more than about three-fold less activity relative to the polypeptide of the present invention).

[043]   Table 1A summarizes some of the immune/hematopoietic associated polynucleotides encompassed by the invention (including contig sequences (SEQ ID NO:X) and clones (Clone ID NO:Z) and further summarizes certain characteristics of these polynucleotides and the polypeptides encoded thereby.

Polynucleotides and Polypeptides

TABLE 1A

Clone ID NO: Z	Contig ID:	SEQ ID NO: X	ORF (From-To)	AA SEQ ID NO: Y	Predicted Epitopes	Tissue Distribution Library code: count (see Table IV for Library Codes)	Cytologic Band	OMIM Disease Reference(s):
HAMHB21	961376	11	17 - 2389	9763		AR089: 3, AR061: 1 H0271: 18, H0556: 9, H0265: 8, H0581: 8, L0761: 4, H0543: 4, H0422: 4, H0656: 3, H0457: 3, L0766: 3, T0002: 2, L0748: 2, H0220: 1, H0650: 1, S0282: 1, H0610: 1, H0069: 1, H0635: 1, H0179: 1, H0416: 1, H0031: 1, H0090: 1, T0041: 1, H0560: 1, H0529: 1, L0667: 1, L0649: 1, L0803: 1, L0659: 1, L0666: 1, S0052: 1, S0216: 1, H0702: 1, H0518: 1, H0521: 1, L0750: 1, H0445: 1, H0423: 1, H0677: 1 and H0506: 1.		
HASAX16	573692	12	138 - 302	9764	Tyr-20 to Ile-33.	H0004: 2		
HASAY74	526312	13	79 - 318	9765		H0004: 1, H0090: 1 and H0543: 1.		
HASAY89	958768	14	125 - 280	9766	Glu-28 to Lys-34.	H0004: 1, L0749: 1 and H0445: 1.		
HASAY94	521835	15	2 - 103	9767	Thr-10 to Asn-22.	H0004: 2		
HBCAL36	931477	16	3 - 440	9768	Glu-26 to Ser-31, Glu-36 to Gln-55, Glu-70 to Asn-82, Ser-93 to Pro-98, Ser-115 to Ser-121.	H0370: 1, H0581: 1 and H0264: 1.		
HBCAL39	964871	17	333 - 491	9769	Arg-1 to Ser-6.	H0255: 2, H0370: 2 and S0053: 1.		
HBCAM74	864366	18	1 - 348	9770	Pro-29 to Ser-37.	H0341: 1, H0370: 1 and		

Clone ID	Accession	SEQ ID	Range	SEQ ID NO	AA Region	Codes	Chromosome	Numbers
HBCAR79	573989	19	186 - 359	9771	Pro-12 to Trp-31.	L0520: 1.		
HBCAS69	669802	20	3 - 245	9772		H0370: 2		
HBCAT17	503573	21	48 - 266	9773	Trp-1 to Ser-11.	H0370: 1 and H0063: 1.		
HBCAT63	573993	22	1 - 96	9774		S0114: 1, H0370: 1, H0075: 1 and L0758: 1.	3q26	165215, 222900, 600049
HBCBM52	932514	23	464 - 574	9775		H0370: 2		
HBCBX12	861018	24	42 - 233	9776	Gly-1 to Gly-6, Pro-23 to Pro-29.	H0370: 1, T0042: 1 and H0423: 1.		
HBCBZ05	922800	25	539 - 727	9777		H0271: 2 and H0370: 1.		
HBDAC79	935414	26	1 - 366	9778	Met-4 to Lys-12, Phe-41 to Phe-50.	H0370: 2		
						AR089: 2, AR061: 1 H0556: 2, L0766: 2, S0418: 1, S0442: 1, H0393: 1, H0261: 1, S0222: 1, H0545: 1, H0050: 1, S6028: 1, H0551: 1, H0494: 1, S0144: 1, S0002: 1, H0529: 1, H0521: 1, L0439: 1, L0759: 1, S0308: 1, L0366: 1 and H0506: 1.		
HBDAD04	614849	27	87 - 293	9779		H0063: 1 and S0308: 1.		
HBDAF51	725481	28	275 - 484	9780		H0255: 1, L0756: 1 and S0308: 1.	19q13.4	134790, 191044, 600040, 600138
HBDAF61	864338	29	124 - 306	9781	Leu-49 to Ser-54.	H0486: 1, H0522: 1 and S0308: 1.		
HBJAB59	557972	30	223 - 369	9782	Arg-11 to Ser-28.	H0318: 1 and H0264: 1.		
HBJAC23	529753	31	3 - 176	9783		H0265: 1 and H0318: 1.		
HBJAG72	722723	32	2 - 217	9784	Ser-1 to Pro-7.	H0318: 2		
HBJAI91	677397	33	9 - 308	9785	Lys-38 to Ser-43.	H0318: 2		
HBJAJ75	953840	34	120 - 275	9786		H0318: 4		
HBJAJ85	675904	35	3 - 83	9787		H0305: 1 and H0318: 1.		
HBJAV57	527998	36	2 - 271	9788		H0318: 1 and S0053: 1.		
HBJAY76	527908	37	55 - 300	9789	Lys-3 to Trp-9.	H0318: 2		
HBJAY91	828026	38	17 - 205	9790		H0318: 2		

HBJBM14	781398	39	79 - 189	9791		H0254: 2 and H0318: 1.
HBJBR94	527903	40	177 - 344	9792		H0318: 2
HBJBU55	527112	41	137 - 271	9793	Gly-1 to Pro-6.	H0318: 2
HBJCD43	714390	42	20 - 145	9794		H0318: 2
HBJCD88	697628	43	158 - 334	9795	Ile-39 to Gln-48.	H0318: 1 and H0445: 1.
HBJCJ68	823468	44	99 - 182	9796		H0318: 1 and H0445: 1.
HBJCO81	527711	45	1 - 132	9797	Ser-28 to Arg-44.	H0318: 2
HBJCR51	847946	46	39 - 185	9798	Pro-29 to Thr-36.	T0002: 1 and H0318: 1.
HBJCR90	527702	47	206 - 331	9799		S0114: 1 and H0318: 1.
HBJDL73	531104	48	64 - 171	9800		H0318: 2
HBJDN14	856216	49	89 - 316	9801	Gln-46 to Gln-54.	H0318: 1 and S0344: 1.
HBJDO70	752830	50	2 - 148	9802		H0318: 2
HBJDP32	573846	51	1 - 117	9803	Lys-1 to Phe-6.	H0318: 2
HBJDP41	494836	52	1 - 153	9804		H0318: 2
HBJDQ75	847935	53	3 - 209	9805		H0318: 2
HBJDT05	932302	54	38 - 100	9806		H0318: 2
HBJDT47	573728	55	18 - 98	9807		H0318: 2
HBJDW23	919383	56	151 - 420	9808		H0318: 2
HBJDW36	573847	57	165 - 377	9809	Gln-1 to Lys-15.	H0318: 2
HBJDX18	795732	58	267 - 557	9810	Lys-19 to Glu-24, Lys-78 to Leu-83.	H0254: 1, H0318: 1 and L0599: 1.
HBJDX51	716395	59	245 - 391	9811		H0318: 3
HBJEA22	674872	60	35 - 208	9812	Leu-2 to Asn-15.	H0318: 1 and S0053: 1.
HBJEA25	589249	61	221 - 466	9813	Asp-15 to Arg-20, Ser-39 to Tyr-44, Gln-54 to Gly-60.	H0318: 1, H0090: 1, L0766:12 1, L0748: 1 and L0779: 1.
HBJEA44	973376	62	292 - 459	9814		H0318: 3
HBJEA65	934994	63	342 - 518	9815	Asp-5 to Trp-12, Arg-18 to Gln-28.	H0318: 2 and L0748: 1.
HBJEA90	895961	64	271 - 516	9816		AR054: 10, AR051: 2, AR050: 1 H0306: 1, H0318: 1, L0766: 1 and L0776: 1.
HBJED66	787251	65	10 - 174	9817		H0318: 1 and H0264: 1.
HBJEE29	888625	66	98 - 244	9818		AR054: 21, AR051: 14,

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Clone	ID	SEQ ID	Range	Residues	Data
HBJEE30	531103	67	2 - 229		AR050: 14 H0090: 2, H0318: 1 and S0426: 1.
HBJEH70	971161	68	1 - 78		H0318: 2 and L0766: 1.
HBJEI42	669495	69	140 - 424		H0255: 1 and H0318: 1.
HBJEI21	671201	70	80 - 202	Asp-26 to Pro-33.	H0318: 2
HBJEJ29	693490	71	117 - 425	Arg-2 to Pro-15, Pro-37 to Trp-52.	H0318: 2.
HBJEJ83	847920	72	115 - 264		H0318: 1, L0766: 1 and H0445: 1.
HBJEO29	693491	73	2 - 190	Lys-43 to Ser-49.	H0318: 2
HBJEP15	847843	74	54 - 257		AR051: 21, AR054: 19, AR050: 13 H0318: 2
HBJEP73	764573	75	105 - 227	Pro-14 to Phe-19.	H0318: 2
HBJER19	953804	76	101 - 262	Arg-5 to Glu-10, Arg-16 to Gln-24.	H0318: 2
HBJES44	715846	77	3 - 380		L0747: 2, S0114: 1, H0318: 1, L0770: 1, L0658: 1 and L0790: 1.
HBJET76	527553	78	419 - 571		H0305: 2, H0402: 1, H0318: 1, L0761: 1 and H0445: 1.
HBJET94	794343	79	33 - 167		S0140: 2 and H0318: 1.
HBJEW15	507534	80	554 - 102	Ser-1 to Ser-7, Pro-16 to Cys-21.	H0255: 1 and H0318: 1.
HBJEZ09	573781	81	101 - 238		S0116: 1 and H0318: 1.
HBJEZ16	421567	82	157 - 330		H0318: 2
HBJEZ39	690479	83	3 - 155	Pro-1 to Asn-8.	H0318: 1 and H0445: 1.
HBJFC51	725818	84	22 - 216		S0116: 1 and H0318: 1.
HBJFJ53	573806	85	177 - 425		H0318: 2 and L0748: 2.
HBJFK55	625315	86	137 - 301	Arg-41 to Arg-48.	H0318: 2
HBJFL49	573970	87	256 - 378		H0318: 2
HBJFP58	738298	88	1 - 87	Lys-1 to Ser-9, Ser-20 to Pro-26.	H0318: 2

HBJFV07	953795	89	1 - 135	9841	Ala-12 to Lys-19.	H0318: 2	
HBJFV59	573747	90	167 - 280	9842	Pro-28 to Phe-38.	H0318: 2	
HBJFW10	878778	91	113 - 418	9843	Ala-59 to Val-65, Val-73 to Met-78.	H0318: 2	
HBJFW19	573765	92	143 - 352	9844		H0318: 2	
HBJFW20	573755	93	194 - 328	9845		H0318: 2	
HBJFW50	571351	94	3 - 200	9846		H0318: 2	
HBJFW55	526682	95	2 - 199	9847	Ala-1 to Phe-12.	H0318: 2	
HBJFW68	573766	96	103 - 186	9848	Gly-2 to Glu-7.	H0318: 2	
HBJFW78	571347	97	95 - 340	9849	Asn-4 to Cys-10.	H0318: 2	
HBJFX57	573760	98	2 - 106	9850		H0318: 2	
HBJFX81	529843	99	55 - 240	9851	Asp-41 to Gly-47.	H0318: 1 and H0264: 1.	
HBJFY40	574095	100	276 - 464	9852		H0318: 1 and H0271: 1.	
HBJFZ21	671191	101	1 - 150	9853	Asn-4 to Leu-10, Thr-14 to Ser-23.	H0318: 2	
HBJFZ40	526679	102	1 - 420	9854	Ala-86 to Ala-95.	H0318: 2	
HBJFZ56	507530	103	56 - 256	9855		H0318: 2	
HBJFZ82	799685	104	147 - 338	9856	Arg-16 to Pro-23.	H0318: 3	
HBJGR59	739095	105	10 - 198	9857	Ser-1 to Glu-7.	H0318: 1 and H0444: 1.	
HBJGT72	957668	106	15 - 341	9858	Gly-1 to Gln-7, Cys-16 to Ser-26, Pro-55 to Gln-60, Ala-62 to Ser-71, Ser-82 to Arg-88.	H0457: 2 and H0318: 1.	22q11	104170, 104170, 104170, 115470, 142360, 188400, 188400, 217095, 600850, 601607
HBJGT92	919507	107	275 - 490	9859	Lys-7 to Ser-18, Pro-32 to Glu-51.	AR089: 1, AR061: 1 H0318: 2, L0517: 2 and L0748: 1.	
HBJGU70	864063	108	199 - 375	9860	Pro-26 to Lys-31.	H0318: 1, H0436: 1 and S0308: 1.	
HBJGU78	920821	109	130 - 552	9861	Ser-26 to Lys-42, Glu-62 to Ser-68.	S0116: 1, H0318: 1 and L0769: 1.	
HBJGV17	662725	110	305 - 451	9862	Tyr-6 to Gln-12.	H0255: 1 and H0318: 1.	
HBJGV22	613781	111	3 - 128	9863	Lys-37 to Met-42.	H0318: 2	8p21	152760, 180100, 185430, 602629
HBJGV32	699075	112	100 - 243	9864	Asn-40 to Lys-48.	H0444: 2 and H0318: 1.	

HBJHG04	836184	113	81 - 317	9865	Glu-1 to Ser-7, Gln-55 to Arg-60.	H0318: 2
HBJHG76	970826	114	265 - 405	9866	Lys-1 to Cys-10.	H0318: 1 and H0436: 1.
HBJHI28	686278	115	2 - 118	9867	Lys-1 to Phe-16.	S0114: 1 and H0318: 1.
HBJHJ44	621723	116	55 - 318	9868	Thr-30 to Asp-36, Ala-43 to His-49, Ile-79 to Thr-88.	L0745: 2, H0318: 1 and S0002: 1.
HBJHM50	724183	117	220 - 348	9869		H0318: 2
HBJHM57	973257	118	131 - 364	9870		H0318: 2
HBJHM76	715512	119	25 - 204	9871	Ile-53 to Gly-58.	S0114: 1 and H0318: 1.
HBJHN52	726570	120	118 - 288	9872		H0318: 2
HBJHO11	964943	121	283 - 534	9873	Met-41 to Gly-46, Ile-50 to Leu-56, Val-60 to Thr-68.	L0794: 3, S0114: 1, H0318: 1, L0769: 1, L0639: 1 and L0768: 1.
HBJHO60	975186	122	95 - 373	9874	Lys-17 to Gly-23.	H0318: 2
HBJHR56	686717	123	359 - 586	9875	Asn-28 to Trp-37.	S0114: 1 and H0318: 1.
HBJHT32	488736	124	203 - 334	9876		H0318: 2
HBJHV93	881606	125	162 - 353	9877		H0318: 1, H0521: 1 and L0600: 1.
HBJHX08	958970	126	423 - 590	9878		H0318: 2
HBJHZ03	923733	127	305 - 505	9879		S0114: 1, H0306: 1, H0402: 1 and H0318: 1.
HBJHZ08	958969	128	213 - 386	9880	Lys-14 to Thr-19, Trp-27 to Gly-33.	S0114: 1 and H0318: 1.
HBJIA19	920881	129	430 - 639	9881		H0318: 2 and L0777: 1.
HBJIA92	494812	130	189 - 326	9882		H0318: 1 and H0271: 1.
HBJID21	670642	131	328 - 429	9883	Lys-24 to Gly-30.	H0318: 1, L0519: 1, H0436: 1 and L0752: 1.
HBJID81	697594	132	6 - 212	9884	Gln-29 to Asn-35, Lys-56 to Pro-65.	H0305: 2, H0589: 1, H0318: 1 and L0766: 1.
HBJIL11	966701	133	248 - 427	9885		S0114: 1 and H0318: 1.
HBJIL31	847865	134	259 - 423	9886		H0318: 1 and H0421: 1.
HBJIL53	971136	135	258 - 473	9887		H0402: 1 and H0318: 1.
HBJIL75	698405	136	151 - 384	9888		H0318: 1 and H0272: 1.
HBJIL88	721859	137	223 - 360	9889		S0428: 2, H0318: 1 and

HBJIO70	725097	138	286 - 420	9890	Glu-9 to Asn-19.	S0052: 1.
HBJIO79	774812	139	361 - 498	9891		H0318: 2
HBJIR58	735365	140	156 - 344	9892		L0766: 2, H0318: 1, L0805: 1, L0776: 1 and H0543: 1.
HBJIY20	669519	141	10 - 162	9893		H0318: 1 and S0002: 1.
HBJIY86	725084	142	424 - 651	9894	Ala-1 to Ala-8.	AR061: 6, AR089: 2 H0318: 2
HBJJB02	919379	143	16 - 201	9895		H0318: 1 and H0444: 1.
HBJJB04	878974	144	1 - 264	9896	Arg-1 to Arg-17.	H0318: 2
HBJJB11	965016	145	30 - 266	9897	Ser-5 to Lys-11, Arg-19 to Gly-25, Ser-28 to Glu-33.	H0318: 2, L0766: 2 and L0599: 2.
HBJJB15	659920	146	36 - 413	9898	Glu-12 to Gly-17, Pro-28 to Glu-40, Gln-47 to Arg-52.	H0318: 2 and L0740: 1.
HBJJB26	681342	147	34 - 147	9899	Gln-1 to Gln-12, Ser-25 to Pro-30.	H0318: 2
HBJJB40	710873	148	2 - 157	9900	Ser-26 to Gly-35.	H0318: 2 and L0758: 2.
HBJJB61	741615	149	1 - 309	9901	Cys-20 to Ser-27, Trp-34 to Gly-40.	H0318: 2
HBJJB62	743096	150	114 - 284	9902	Ser-1 to Trp-7, Ile-18 to Ala-28, Pro-50 to Pro-57.	H0318: 2
HBJJB74	765406	151	11 - 232	9903	Gly-1 to Trp-10, Arg-40 to Ala-50.	H0318: 2
HBJJB78	489438	152	218 - 403	9904	Ser-14 to Thr-31, Val-35 to Gln-40, Leu-46 to Tyr-54.	H0318: 2
HBJJD31	691780	153	81 - 362	9905	Pro-45 to Asp-50.	H0318: 2
HBJJD90	712982	154	204 - 410	9906	Gln-6 to Gln-12, Tyr-14 to Lys-19, Gln-45 to Phe-50.	H0318: 2
HBJJH48	721473	155	127 - 306	9907		H0318: 2
HBJJN13	915977	156	2 - 202	9908	Ser-32 to Glu-37,	H0318: 2

HBJJQ29	666221	157	3 - 212	9909	Lys-51 to Asn-57.	H0318: 2
HBJJS46	718894	158	3 - 230	9910	Gln-39 to Ser-47, Thr-55 to Phe-65.	H0318: 2 and H0580: 1.
HBJJU62	664298	159	256 - 429	9911	Ser-35 to Thr-40, Ser-48 to Asp-54.	H0318: 1 and S0002: 1.
HBJJU81	671611	160	388 - 59	9912	Asp-47 to Phe-66, Ser-105 to Asn-110.	H0318: 1, L0764: 1 and S0053: 1.
HBJJX04	949592	161	702 - 400	9913		L0761: 2, H0318: 1, H0581: 1 and L0800: 1.
HBJJX11	847854	162	183 - 1	9914		H0318: 2
HBJJX44	657242	163	100 - 264	9915		H0556: 1, S0116: 1, H0318: 1, H0591: 1, L0740: 1 and L0605: 1.
HBJKA75	682250	164	102 - 218	9916		S0116: 1 and H0318: 1.
HBJKC52	974123	165	102 - 284	9917	Pro-8 to Leu-15, Phe-26 to Gln-32.	H0318: 3
HBJKC56	735812	166	53 - 301	9918	Leu-3 to Lys-10, Thr-15 to Leu-28.	H0318: 2, L0741: 1 and L0748: 1.
HBJKC86	974121	167	360 - 518	9919		H0318: 3
HBJKD68	676330	168	2 - 250	9920	Ser-8 to Cys-13.	H0254: 1 and H0318: 1.
HBJKE63	744847	169	74 - 193	9921	Pro-1 to Lys-9, Asn-24 to Glu-32.	H0318: 1 and S0052: 1.
HBJKF06	935033	170	118 - 315	9922		H0318: 2 and L0779: 1.
HBJKF86	714449	171	1 - 267	9923		H0318: 1 and H0445: 1.
HBJKI26	489160	172	267 - 392	9924		H0318: 2 and L0749: 1.
HBJLB78	588085	173	1 - 117	9925		H0318: 1 and H0542: 1.
HBJLC51	784830	174	113 - 661	9926		H0486: 2, L0598: 2, L0751: 2, L0758: 2, H0318: 1, L0794: 1, L0766: 1, L0804: 1, L0775: 1, L0663: 1 and H0445: 1.
HBJLD57	683265	175	1 - 171	9927		H0318: 1, L0766: 1 and H0445: 1.
HBJLD73	765356	176	147 - 347	9928	Lys-26 to Arg-34, Pro-45 to Asn-50.	H0318: 2

Name	Number	Range	SEQ	Description	Clone info	Location	References
HBJLE82	735748	284 - 397	177		H0318: 2		
HBJLF58	864013	52 - 192	178	Ser-39 to Lys-47.	H0318: 2		
HBJLL07	952791	58 - 144	179		H0318: 2		
HBJLL13	656721	215 - 304	180		H0318: 2		
HBJLL18	665874	59 - 244	181	Lys-1 to Thr-18, Trp-26 to Ser-32.	H0318: 2		
HBJLL28	847840	44 - 223	182	Lys-2 to Ile-8.	H0318: 2		
HBJLL57	734522	3 - 116	183		H0318: 2 and H0551: 1.		
HBJLL68	752810	39 - 137	184		H0318: 2		
HBJLP14	657747	164 - 295	185		H0318: 1 and H0264: 1.		
HBJLR56	843811	189 - 719	186	Gly-1 to Arg-14.	L0362: 3, H0318: 2, L0601: 2 and : 1.	19q13.3-q13.4	113900, 126340, 126391, 130410, 134790, 138570, 160900, 173850, 191044, 258501, 600040, 600138, 602225, 602225
HBJLR82	779004	1 - 366	187	Ala-1 to Gln-6.	H0318: 2	2p23.3	176830, 176830, 182601, 229800, 602134
HBJLV29	823400	1 - 387	188	Gly-19 to Ser-28, Ser-33 to Thr-38.	H0318: 2		
HBJMA30	661665	2 - 274	189	Ser-10 to Lys-17, Arg-44 to Val-72.	H0318: 2, L0766: 1 and L0748: 1.		
HBJMA51	725095	101 - 184	190		H0318: 1 and S0053: 1.		
HBJMC53	726491	167 - 310	191		H0318: 2		
HBJMD71	760155	328 - 459	192		H0318: 1 and H0581: 1.		
HBJMD74	975088	53 - 208	193	Asp-1 to Pro-7.	S0116: 1 and H0318: 1.		
HBJME92	792110	32 - 190	194	Arg-1 to Ser-8, Glu-22 to Asp-30, Ala-38 to Arg-43.	H0318: 2		
HBJMF23	675692	29 - 202	195	Gln-15 to Gly-20.	H0318: 2		
HBJMF30	691179	2 - 166	196		H0318: 1 and H0521: 1.		
HBJMF47	720050	1 - 189	197	Arg-17 to Ala-22.	H0318: 2		
HBJMI76	720047	150 - 362	198	Arg-22 to Lys-29, Leu-46 to Pro-53.	H0318: 2		

HBJMK34	935952	199	109 - 456	9951		H0318: 1, T0042: 1 and L0758: 1.
HBJMK94	794129	200	80 - 196	9952		L0745: 4, H0486: 1, H0318: 1, L0764: 1 and L0788: 1.
HBJML28	614911	201	271 - 420	9953		H0318: 2
HBJML69	864004	202	246 - 419	9954	Thr-18 to Trp-23.	S0114: 1, H0370: 1 and H0318: 1.
HBJMM72	760833	203	3 - 422	9955	Glu-15 to Ala-24.	L0804: 5, H0656: 3, H0318: 2, L0766: 2, S0114: 1, H0657: 1, H0625: 1, L0761: 1, L0803: 1, L0774: 1, L0655: 1 and H0542: 1.
HBJMN75	699060	204	202 - 366	9956	Ala-24 to Arg-30.	H0318: 3
HBJMQ86	576429	205	64 - 351	9957		H0255: 1, H0318: 1 and S0053: 1.
HBJMR15	964484	206	2 - 136	9958	Lys-37 to Val-43.	H0318: 1 and H0436: 1.
HBJMR60	740142	207	29 - 337	9959		H0318: 1 and H0444: 1.
HBJMT52	726480	208	2 - 163	9960		H0318: 1 and S0053: 1.
HBJMV72	952862	209	282 - 413	9961		H0318: 1 and H0444: 1.
HBJMW20	669030	210	158 - 319	9962		H0318: 1 and H0445: 1.
HBJMX04	614930	211	128 - 352	9963	Pro-6 to Glu-19.	H0318: 2
HBJMX21	933143	212	158 - 367	9964	Glu-26 to Pro-36.	H0318: 1 and H0264: 1.
HBJMX29	690404	213	217 - 360	9965		H0318: 2
HBJMX34	703843	214	122 - 289	9966	Ala-30 to Arg-37.	H0318: 2
HBJNC11	966608	215	165 - 509	9967		H0318: 2
HBJNC89	786707	216	28 - 189	9968	Ala-1 to Pro-6, Pro-9 to Asp-21.	H0318: 2 and S0216: 1.
HBJND59	576434	217	152 - 358	9969	Lys-36 to Cys-51, Glu-61 to Val-66.	S0053: 2 and H0318: 1.
HBMBC18	578887	218	12 - 131	9970		H0421: 2
HBMBC25	573103	219	1 - 171	9971	Ser-1 to His-11, Ser-43 to Trp-50.	S0116: 1 and H0421: 1.
HBMBC35	921417	220	1 - 180	9972		S0116: 1 and H0421: 1.
HBMBC91	506594	221	90 - 389	9973	Cys-20 to Asp-25.	L0748: 3, L0749: 2, S0116: 1 and H0421: 1.

HBMBE72	760737	222	37 - 426	Trp-3 to Pro-10.	H0341: 1, H0421: 1, L0776: 1, L0789: 1, L0731: 1 and H0542: 1.
HBMBE84	578869	223	63 - 338	Arg-6 to Asn-13, Leu-58 to Leu-64.	H0421: 2
HBMBH36	971172	224	96 - 260		H0421: 5
HBMBH55	732250	225	52 - 219		H0421: 2
HBMBH91	753141	226	2 - 211	Ala-45 to Asp-50.	H0421: 3
HBMBI06	935819	227	121 - 267	Gly-19 to Asp-24.	H0421: 1 and H0423: 1.
HBMBN32	775670	228	82 - 375	Arg-1 to Asn-7.	H0318: 1 and H0421: 1.
HBMBO20	496513	229	154 - 372	Pro-7 to Phe-14, Glu-46 to Val-53.	H0421: 2
HBMBQ33	702457	230	134 - 421	Ser-14 to Asn-19.	S0116: 1, H0421: 1 and L0748: 1.
HBMBQ83	689705	231	93 - 218	Leu-8 to Glu-25.	H0421: 2, L0777: 1 and L0731: 1.
HBMBS11	967111	232	154 - 315	Arg-35 to Lys-41, Leu-47 to Ser-54.	H0421: 2
HBMBT85	863938	233	112 - 312		S0116: 1 and H0421: 1.
HBMBU24	677240	234	1 - 192	Met-25 to Gln-30, Leu-34 to His-40, Thr-46 to Lys-64.	H0421: 2 and S0116: 1.
HBMBU38	531494	235	142 - 246	Ser-7 to Ser-13.	S0116: 1, H0318: 1, H0421: 1 and S0002: 1.
HBMBX69	698362	236	1 - 105	Glu-9 to Cys-17.	S0116: 1 and H0421: 1.
HBMBY27	574803	237	259 - 420		S0116: 2 and H0421: 1.
HBMBZ71	880580	238	2 - 565	Pro-13 to Pro-18, Ala-25 to Val-31, Thr-71 to Ala-76, Gly-101 to Pro-117, Pro-130 to Arg-135.	L0752: 2, L0758: 2, H0421: 1, S0428: 1 and L0779: 1.
HBMCA44	716647	239	1 - 516	Ala-15 to Glu-21, Ala-37 to Gly-45.	H0421: 1, H0090: 1, L0750: 1, L0777: 1 and L0758: 1.
HBMCA58	736084	240	103 - 282	Gln-25 to Ala-34.	H0421: 2
HBMCA94	793174	241	316 - 432		H0421: 2
HBMCD26	847826	242	1 - 288	Gly-85 to Arg-92.	S0116: 1, H0421: 1, S0426:

HBMCD49	723005	243	133 - 297	9995		1 and L0655: 1.
HBMCE22	674659	244	92 - 274	9996		H0421: 2
HBMCH75	932037	245	190 - 378	9997	Ser-9 to Lys-14.	H0486: 1, H0421: 1, L0805: 1 and L0750: 1.
HBMCH88	711318	246	162 - 251	9998	Leu-1 to Asn-10.	H0421: 1 and H0576: 1.
HBMCK57	495736	247	425 - 237	9999	Gly-1 to Arg-8, Asp-17 to Cys-23, Phe-25 to Lys-33.	H0421: 2, S0134: 1 and H0423: 1.
	847828	9547	136 - 321	19299		H0556: 1, H0421: 1 and H0090: 1.
HBMCQ14	658484	248	25 - 204	10000	Glu-33 to Ala-40, Ser-44 to Arg-53.	H0421: 2
HBMCS34	703438	249	386 - 517	10001	Gly-17 to Gly-25.	S0116: 1, H0421: 1, L0803: 1, L0790: 1 and L0754: 1.
HBMCS77	465070	250	1 - 315	10002	Thr-38 to Ser-45, Pro-63 to Glu-70.	S0116: 1, H0421: 1 and L0748: 1.
HBMCT67	751643	251	1 - 165	10003		H0421: 2
HBMCU92	529580	252	96 - 221	10004	Glu-8 to Arg-15, His-28 to Tyr-34.	H0421: 1 and H0179: 1.
HBMCZ11	967099	253	42 - 248	10005	Leu-15 to Asp-20, Arg-28 to Arg-35.	H0421: 2
HBMCZ27	683436	254	99 - 344	10006		S0116: 1 and H0421: 1.
HBMCZ32	855694	255	62 - 190	10007		H0421: 2
HBMDA51	691116	256	270 - 434	10008		H0421: 2 and H0436: 2.
HBMDC03	924183	257	275 - 367	10009		H0421: 1 and H0445: 1.
HBMDC16	888206	258	1 - 360	10010	Thr-2 to Tyr-11, Glu-64 to Ala-72.	AR054: 1, AR050: 1 H0421: 2
HBMDC88	750274	259	2 - 148	10011		H0421: 2
HBMDD36	861576	260	107 - 292	10012		S0116: 1 and H0421: 1.
HBMDD59	739316	261	2 - 88	10013		S0116: 1, H0421: 1 and L0731: 1.
HBMDE19	657382	262	77 - 241	10014	Pro-41 to Asn-49.	H0421: 2, H0402: 1, L0749: 1 and H0444: 1.
HBMDF55	952830	263	8 - 358	10015		H0421: 1 and H0576: 1.

HBMDH79	805554	264	207 - 446	10016	Arg-1 to His-12.	H0486: 1 and H0421: 1.
HBMDJ11	967046	265	150 - 338	10017	His-23 to Lys-30.	H0421: 2
HBMDJ36	721673	266	116 - 202	10018	Phe-6 to Asn-13, Asp-20 to Tyr-29.	H0421: 2
HBMDK12	970684	267	106 - 360	10019	Phe-49 to Leu-55, Pro-63 to Asn-73.	H0421: 2
HBMDK13	657221	268	228 - 464	10020	Cys-3 to Pro-16.	H0556: 2, H0421: 1, S0426: 1 and L0748: 1.
HBMDS17	796050	269	64 - 267	10021		S0114: 1 and H0421: 1.
HBMDS64	746572	270	176 - 406	10022	Ala-3 to Trp-9.	H0402: 1 and H0421: 1.
HBMSB19	847800	271	126 - 266	10023		S0116: 2
HBMSK92	531156	272	1 - 126	10024		S0116: 2
HBMSO15	847795	273	1 - 141	10025		H0589: 2 and S0116: 1.
HBMSO39	531158	274	3 - 218	10026	Lys-21 to Ala-29.	S0116: 2
HBMTF79	544889	275	2 - 133	10027		S0116: 1 and H0264: 1.
HBMTG05	932497	276	8 - 160	10028		S0116: 2
HBMTM75	574515	277	2 - 310	10029	Pro-13 to Trp-18.	S0116: 2
HBMTP84	703844	278	77 - 220	10030	Leu-1 to Glu-6, Glu-38 to Ala-48.	H0457: 2, S0116: 1 and H0576: 1.
HBMTU03	924979	279	69 - 188	10031	Gly-1 to Pro-15, Lys-23 to Asp-34.	S0116: 2
HBMTW58	806670	280	399 - 593	10032		H0556: 1 and S0116: 1.
HBMTX29	689834	281	1 - 135	10033	Asp-1 to Asn-10.	S0116: 2
HBMTX84	537385	282	95 - 337	10034	Trp-56 to Cys-62.	S0116: 2
HBMTY82	523728	283	94 - 330	10035	Thr-35 to Ala-41.	H0264: 2 and S0116: 1.
HBMUA62	557828	284	135 - 344	10036	Ser-36 to Leu-41.	S0114: 1 and S0116: 1.
HBMUD12	574796	285	152 - 319	10037		S0116: 2
HBMUF60	740606	286	1 - 126	10038	Val-14 to Gly-33.	S0116: 1 and S0308: 1.
HBMUG57	735024	287	62 - 283	10039		S0116: 1 and H0271: 1.
HBMUH62	752244	288	9 - 341	10040	Lys-1 to Ser-9.	S0116: 2
HBMUJ84	531159	289	124 - 237	10041		S0116: 2
HBMUK59	712591	290	2 - 121	10042	Lys-32 to Arg-37.	S0114: 1 and S0116: 1.
HBMUN30	693337	291	83 - 217	10043		S0116: 1 and H0521: 1.
HBMUO10	953933	292	2 - 127	10044		S0116: 2
HBMUO12	417210	293	1 - 192	10045		S0116: 2

HBMUO90	928078	294	2 - 265	10046	Asn-3 to Gln-9.	S0116: 1 and S0002: 1.
HBMUP35	531101	295	80 - 214	10047	Asn-18 to His-24.	S0116: 2
HBMUT83	793052	296	299 - 111	10048	Phe-20 to Ser-29	L0766: 2, L0747: 2, L0779: 2, L0777: 2, L0755: 2, H0583: 1, S0116: 1, L0800: 1, L0644: 1, L0626: 1, L0375: 1, L0776: 1, L0792: 1, L0663: 1, L0748: 1, L0758: 1, L0593: 1 and H0423: 1.
HBMUV03	924916	297	63 - 386	10049	Ser-30 to Leu-38.	S0116: 1, H0457: 1 and H0444: 1.
HBMUY32	959968	298	1 - 195	10050		S0116: 2
HBMUZ96	574522	299	76 - 216	10051		S0116: 2
HBMVA83	529815	300	3 - 287	10052		S0116: 1 and H0264: 1.
HBMVE14	545170	301	340 - 501	10053		S0116: 1, H0421: 1 and L0362: 1.
HBMVI79	781686	302	143 - 3	10054	His-3 to Thr-9.	S0116: 1 and S0212: 1.
HBMVI94	574511	303	55 - 183	10055		S0116: 2
HBMVO02	920759	304	82 - 261	10056	Gln-52 to Tyr-60.	S0116: 1 and H0486: 1.
HBMWA31	529678	305	57 - 215	10057	Ala-6 to Gln-11.	S0116: 1, H0264: 1, L0766: 1, L0803: 1, L0790: 1, L0749: 1 and L0731: 1.
HBMWA57	526863	306	91 - 189	10058	Gln-1 to Gly-10.	S0116: 1 and H0271: 1.
HBMWI35	706033	307	61 - 207	10059		S0218: 1 and S0116: 1.
HBMWJ01	959223	308	267 - 395	10060		S0116: 1, L0794: 1, L0766: 1 and H0543: 1.
HBMWL30	936058	309	3 - 218	10061		S0116: 2
HBMWL91	529837	310	110 - 214	10062	Gln-21 to Gly-26.	S0116: 1 and H0264: 1.
HBMWQ85	765109	311	226 - 411	10063	Leu-2 to Gly-8.	S0116: 2
HBMWV93	574801	312	296 - 451	10064	Ser-6 to Asn-23.	S0116: 1 and H0264: 1.
HBMWX74	573336	313	152 - 322	10065		S0116: 2
HBMWZ14	573335	314	2 - 172	10066		S0116: 2
HBMWZ16	712832	315	144 - 293	10067	Ala-14 to Asp-46.	S0116: 1, H0255: 1 and L0744: 1.
HBMWZ94	573348	316	1 - 153	10068		S0116: 2

HBMXE31	573323	317	1 - 312	10069		S0116: 2
HBMXF47	573324	318	80 - 21	10070	Lys-1 to Ser-6.	S0116: 2
HBMXG08	959766	319	221 - 418	10071		S0116: 1 and H0521: 1.
HBMXH68	571361	320	1 - 186	10072	Glu-38 to Arg-44.	S0116: 1 and H0421: 1.
HBMXL10	968054	321	166 - 399	10073	Gln-20 to Asn-25.	S0116: 2
HBMXM65	925570	322	1 - 156	10074	Arg-1 to Arg-7, Gly-15 to Gly-20.	S0116: 3 and H0341: 1.
HBMXN39	705578	323	171 - 362	10075		S0116: 1 and H0271: 1.
HBMXN69	731274	324	159 - 314	10076	Pro-8 to Asn-16.	S0116: 2
HBMXO08	959768	325	3 - 185	10077	Ala-17 to Cys-27, Ala-29 to Glu-38.	S0116: 2
HBMXP90	574802	326	172 - 321	10078		S0116: 2, H0187: 1, L0748: 1, L0439: 1, L0747: 1 and L0757: 1.
HBMXR44	693123	327	84 - 230	10079		H0556: 1 and S0116: 1.
HBMXS38	706039	328	132 - 347	10080	Lys-32 to Asp-40.	S0116: 1, L0766: 1, L0664: 1 and H0445: 1.
HBMXU37	787155	329	32 - 148	10081	Leu-33 to Phe-39.	S0116: 1 and T0041: 1.
HBMXW13	657241	330	2 - 265	10082	Phe-20 to Val-26.	S0114: 1 and S0116: 1.
HBMXW73	764440	331	188 - 337	10083	Ala-1 to Gly-10, Phe-34 to Glu-42.	L0599: 2, S0116: 1, L0769: 1 and H0521: 1.
HBTAE07	953607	332	24 - 263	10084	Leu-7 to Gly-12, Leu-23 to Cys-28, Thr-34 to Ala-58.	S0180: 1, S0052: 1 and L0599: 1.
HBUAG42	676856	333	3 - 362	10085		H0486: 1 and S0182: 1.
HBYAA17	924209	334	3 - 152	10086	Ser-34 to Cys-44.	S3016: 2 and S0053: 1.
HBYAB40	463488	335	92 - 319	10087	Ser-23 to Trp-31.	S3016: 1 and H0422: 1.
HCFAA38	576731	336	84 - 422	10088	Ser-1 to Gly-10, Arg-15 to Gly-20, Pro-71 to Lys-79.	H0422: 2
HCFAC84	869259	337	391 - 570	10089	Asn-53 to Thr-60.	H0556: 1 and H0422: 1.
HCFAF63	689719	338	156 - 266	10090		H0445: 1 and H0422: 1.
HCFAT85	728254	339	155 - 346	10091	Leu-6 to Gln-12, Ser-53 to Lys-64.	S0053: 1 and H0422: 1.
HCFAU41	576064	340	141 - 302	10092	Gly-8 to Leu-13,	H0543: 1 and H0422: 1.

				Asp-32 to Lys-40.		
HCFAU74	576069	341	23 - 136		H0422: 2	
HCFAV46	924086	342	92 - 262	Ile-27 to Lys-33, Thr-40 to Ser-45.	H0305: 2, H0402: 1, L0748: 1 and H0422: 1.	
HCFAW03	924532	343	3 - 188	Asp-1 to Arg-13.	L0738: 1, H0521: 1 and H0422: 1.	
HCFAY27	784950	344	1 - 201	Val-12 to Cys-22, Ala-42 to Ala-48.	S0216: 1, L0748: 1, L0749: 1 and H0422: 1.	
HCFAY33	576058	345	36 - 146		H0422: 2	
HCFBA96	853961	346	2 - 148	Arg-1 to Pro-13.	H0422: 2	11
HCFBB14	658542	347	59 - 190	Ala-1 to Leu-8, Glu-12 to Arg-17.	H0656: 1, L0592: 1 and H0422: 1.	
HCFBD91	850449	348	3 - 155	Ile-2 to Lys-11.	H0422: 2	
HCFBF07	953506	349	1 - 99		H0422: 2	
HCFBG82	870890	350	161 - 526	Gly-1 to Gly-6, Thr-20 to Trp-25, Met-30 to Phe-35, Cys-63 to Gly-68, Pro-73 to Gly-93.	H0585: 17, H0141: 7, L0804: 4, H0641: 2, L0769: 2, L0800: 2, L0803: 2, L0809: 2, L0731: 2, L0763: 1, L0761: 1, L0773: 1, L0789: 1, L0747: 1, L0777: 1 and H0422: 1.	
HCFBI39	576018	351	89 - 343	Ser-25 to Thr-31.	H0422: 2	
HCFBI80	576669	352	2 - 241	Pro-1 to Val-18.	H0063: 1 and H0422: 1.	
HCFBL08	959617	353	46 - 225	Ser-16 to Tyr-39, Pro-42 to Gly-48.	H0220: 1 and H0422: 1.	
HCFBN62	576126	354	40 - 372	Ser-23 to Lys-29.	H0255: 1, H0436: 1, H0576: 1 and H0422: 1.	
HCFBO39	835926	355	111 - 281	Leu-12 to Met-23.	H0422: 2	
HCFBO76	577218	356	47 - 223	Lys-42 to Asn-53.	S0053: 1 and H0422: 1.	
HCFBR92	576864	357	266 - 472	Gln-29 to Thr-40, Glu-42 to Gly-51.	H0423: 1 and H0422: 1.	
HCFBS25	828076	358	3 - 170		H0556: 1 and H0422: 1.	
HCFBS73	506244	359	207 - 401	Ile-7 to Arg-17, Ser-33 to Thr-45.	H0422: 2	11
HCFBU01	916703	360	265 - 495	Thr-1 to Glu-10, Phe-19 to Lys-35.	S0114: 2, H0402: 1 and H0422: 1.	

HCFBU38	707620	361	183 - 287	Gly-18 to Ser-29.	H0422: 2		
HCFBU84	573546	362	349 - 459		H0341: 2 and H0422: 1.		
HCFBU85	576010	363	1 - 267		H0422: 2		
HCFBW13	828042	364	253 - 447		H0422: 2	7q21-q22	116860, 126650, 126650, 129900, 133170, 154276, 173360, 173360, 602136, 602136, 602136, 602447
HCFBY02	920340	365	218 - 385	Val-1 to Lys-9.	S0426: 1, L0659: 1, L0731: 1 and H0422: 1.		
HCFCA31	725700	366	44 - 388		L0748: 1, H0543: 1 and H0422: 1.		
HCFCB67	751764	367	61 - 297		H0445: 1 and H0422: 1.		
HCFCC57	5773375	368	2 - 268		L0805: 3, H0264: 1, L0629: 1 and H0422: 1.		
HCFCC68	753089	369	1 - 171	Tyr-20 to Lys-27.	H0576: 1 and H0422: 1.		
HCFCC94	670538	370	3 - 146	Asp-1 to Gly-6, Leu-31 to Ala-38, Pro-40 to Arg-45.	H0589: 1 and H0422: 1.		
HCFCD44	883973	371	102 - 410	Leu-15 to Val-20, Pro-22 to Lys-32.	H0305: 2 and H0422: 1.		
HCFCF47	894415	372	2 - 298	Arg-1 to Glu-8.	AR089: 14, AR061: 7 H0341: 1 and H0422: 1.		
HCFCH47	720400	373	140 - 268		S0134: 1 and H0422: 1.		
HCFCJ21	671028	374	72 - 191	Leu-17 to Lys-40.	AR089: 0, AR061: 0 H0422: 2		
HCFCM12	970835	375	386 - 670	Gln-6 to Ala-13, Ser-15 to Ser-20.	L0748: 1, L0439: 1, H0445: 1 and H0422: 1.		
HCFCN66	850422	376	116 - 256		H0422: 2		
HCFCN81	576871	377	146 - 481		H0341: 1, L0439: 1, L0590: 1 and H0422: 1.		
HCFCP14	577277	378	1 - 111		S0114: 1 and H0422: 1.		
HCFCP31	764750	379	63 - 443	Glu-30 to Lys-36, Gly-59 to Leu-65.	H0090: 2, H0486: 1, L0766: 1, L0743: 1, L0751: 1, L0777: 1 and H0422: 1.		

HCFCR76	862682	380	2 - 247	10132	Arg-1 to Thr-6.	S0114: 2 and H0422: 1.		
HCFCX73	575988	381	110 - 256	10133	Leu-22 to Asn-27.	H0422: 2		
HCFDB13	576709	382	79 - 297	10134	Ser-49 to Thr-54.	S0052: 1 and H0422: 1.		
HCFDD48	720938	383	90 - 236	10135	Cys-14 to Arg-22, Lys-25 to Cys-33.	H0444: 1 and H0422: 1.		
HCFDE10	961270	384	156 - 332	10136		H0650: 1 and H0422: 1.		
HCFDE19	671507	385	283 - 564	10137		H0271: 1, L0731: 1 and H0422: 1.		
HCFDE79	575996	386	196 - 327	10138	Thr-15 to Asn-23, Ile-29 to Lys-39.	H0422: 2		
HCFLC28	968304	387	139 - 357	10139	Ile-1 to Ala-8, Ala-47 to Glu-52, Gln-64 to Asp-69.	H0264: 1 and H0423: 1.		
HCFLD28	850564	388	131 - 448	10140	Ile-2 to Lys-7, Pro-13 to Ser-24, Ser-37 to Gln-45, His-55 to Pro-64, Thr-74 to Glu-81.	H0423: 2, S0114: 1, L0790: 1 and H0436: 1.		
HCFLD78	773685	389	422 - 616	10141	Phe-10 to Ser-17, Gly-31 to Ser-42.	L0749: 3, L0743: 2, L0758: 2, H0318: 1, L0770: 1, L0806: 1, L0744: 1, L0748: 1, L0751: 1, L0747: 1, L0777: 1 and H0423: 1.		
HCFLE44	576679	390	63 - 260	10142	Gln-47 to Ala-53.	S0052: 1, H0444: 1 and H0423: 1.		
HCFLE95	945122	391	2 - 277	10143	Pro-1 to Ser-27.	S0344: 1 and H0423: 1.	15q26.1	166800, 210900
HCFLF96	579039	392	2 - 130	10144	Ser-2 to Lys-16.	H0305: 1 and H0423: 1.		
HCFLG84	711243	393	140 - 400	10145	Gly-1 to Ser-10, Pro-18 to Phe-29.	H0255: 1 and H0423: 1.		
HCFLI49	722269	394	236 - 538	10146		H0250: 1, T0042: 1 and H0423: 1.		
HCFLJ40	576068	395	228 - 338	10147		H0423: 2		
HCFLP31	698139	396	85 - 222	10148		S0053: 1 and H0423: 1.		
HCFLR55	576043	397	58 - 255	10149		H0423: 2		
HCFLR83	576054	398	150 - 269	10150		H0423: 2 and H0436: 1.		
HCFLT42	576040	399	1 - 171	10151	Tyr-8 to Gln-14,	H0423: 2 and L0766: 1.		

HCFLU12	970849	400	154 - 474	10152	Ser-25 to Asp-31.	H0543: 1 and H0423: 1.	
HCFLW58	964870	401	301 - 444	10153	Thr-38 to Val-45.	L0002: 1, H0063: 1, L0594: 1 and H0423: 1.	
HCFMC42	670519	402	2 - 196	10154	Pro-3 to Ser-8.	H0589: 1, S0426: 1 and H0423: 1.	
HCFMD15	975075	403	214 - 441	10155	Ala-13 to Glu-19.	H0556: 2 and H0423: 1.	
HCFMD23	676003	404	2 - 208	10156	Gly-1 to Ser-15, Pro-36 to Glu-58.	S0344: 1 and H0423: 1.	
HCFME27	576815	405	76 - 318	10157	Pro-16 to Arg-33, Cys-68 to Gly-74.	S0053: 1 and H0423: 1.	
HCFMF47	973243	406	192 - 374	10158	Arg-54 to Lys-61.	H0436: 2 and H0423: 1.	
HCFMF64	773342	407	1 - 687	10159	His-4 to Asn-14, Ser-59 to Lys-75, Arg-77 to Leu-83, Cys-86 to Trp-93, Glu-103 to Leu-117, Glu-123 to Arg-136, Gln-143 to Glu-153.	H0583: 3, H0543: 2, H0650:1q32 1, T0041: 1 and H0423: 1.	114208, 114208, 119300, 120620, 120620, 120920, 134370, 134370, 134370, 134580, 145260, 150310, 150310, 179820, 191045, 600105, 600759, 601494, 601975
HCFMG14	576063	408	3 - 368	10160	Asp-1 to Arg-9.	H0423: 2	
HCFMH12	970843	409	254 - 403	10161	Asn-16 to Gln-21.	H0423: 2	
HCFMJ70	576096	410	208 - 354	10162		L0532: 1, H0436: 1 and H0423: 1.	
HCFMK25	576081	411	75 - 167	10163	Asn-1 to Asn-8.	H0423: 2	
HCFMK27	576094	412	161 - 292	10164	Leu-31 to Leu-37.	H0423: 2	
HCFMK49	576098	413	3 - 422	10165		H0423: 2	
HCFMK62	576097	414	2 - 241	10166	Arg-1 to Leu-10, Phe-27 to Phe-32, Glu-39 to Ser-45.	H0423: 2	
HCFMK63	506251	415	1 - 216	10167			
HCFML42	576667	416	311 - 415	10168		S0134: 1 and H0423: 1.	
HCFMM81	506250	417	85 - 222	10169		H0423: 2	
HCFMN07	953522	418	2 - 139	10170	Lys-37 to Val-43.	H0306: 1 and H0423: 1.	

Clone	No.	SEQ	Range	SEQ ID	Amino acid range	Code	Chromosome	
HCFMO64	805822	419	267 - 575	10171		S0278: 1, L0439: 1 and H0423: 1.		
HCFMT62	954213	420	283 - 573	10172		H0254: 2, S0114: 1 and H0423: 1.		
HCFMY85	933017	421	94 - 312	10173	Thr-26 to Gly-33.	H0090: 1 and H0423: 1.		
HCFMZ17	664132	422	1 - 198	10174	Ala-6 to Asp-17, Arg-61 to Trp-66.	H0416: 1 and H0423: 1.	9q31.1	223900, 253800, 253800
HCFNA30	772262	423	1 - 141	10175	Gly-1 to Arg-16.	H0423: 2 and H0445: 1.		
HCFNB62	576446	424	58 - 255	10176	Pro-27 to Trp-34, Glu-55 to Ala-62.	H0423: 2		
HCFNK43	973548	425	119 - 514	10177	Lys-1 to Gln-6, Arg-59 to Phe-66.	H0423: 2		
HCFNO55	576008	426	150 - 362	10178		H0423: 2		
HCFNQ04	615351	427	681 - 896	10179	Glu-32 to Arg-37.	S0144: 1, L0605: 1 and H0423: 1.		
HCFOB11	967196	428	65 - 130	10180		H0423: 2, L0766: 1 and H0521: 1.		
HCFOE38	576005	429	102 - 263	10181		H0423: 2 and H0581: 1.		
HCFOF90	561625	430	207 - 356	10182		H0423: 2, H0069: 1 and L0662: 1.		
HCFOG82	576007	431	64 - 180	10183	Lys-10 to Thr-15, Tyr-18 to Thr-23.	H0423: 2		
HCFOH56	577114	432	116 - 262	10184	Tyr-9 to Met-15, Gln-17 to Ser-22, Pro-43 to Ala-49.	H0423: 2 and L0748: 1.		
HCFOI11	967195	433	28 - 216	10185	Lys-19 to Lys-26.	S0052: 1 and H0423: 1.		
HCFOL96	796104	434	24 - 203	10186	Pro-25 to Gly-33.	H0444: 1 and H0423: 1.		
HCFOO18	575965	435	221 - 394	10187		H0423: 2		
HCFOP42	460824	436	299 - 159	10188	Glu-1 to Gly-14, Arg-38 to Ala-43.	H0477: 1 and H0423: 1.		
	862556	9548	257 - 439	19300	Ser-8 to Ile-13.			
HCFOP46	927654	437	39 - 134	10189		H0423: 2		
HCUAA60	670941	438	4 - 66	10190		H0306: 1 and H0402: 1.		
HCUAD58	738408	439	1 - 180	10191		H0583: 1 and H0306: 1.		
HCUAE70	959686	440	2 - 181	10192		H0402: 2 and H0306: 1.		

Clone	ID	SEQ	Range	SEQ NO	Description	Codes	Chromosome	Additional
HCUAG89	706427	441	236 - 394	10193	Pro-15 to Val-29.	H0306: 2		
HCUAG92	504395	442	1 - 129	10194	Glu-1 to Thr-7.	H0306: 1 and H0057: 1.		
HCUAH15	916651	443	1 - 168	10195		H0306: 1 and H0402: 1.	2q11-q12	129490, 167415, 176947, 600334
HCUAH60	916621	444	1 - 153	10196	Glu-16 to Glu-21, Arg-31 to Leu-39.	H0306: 1 and H0402: 1.		
HCUAH70	574164	445	80 - 265	10197	Lys-6 to Gly-22.	H0306: 2		
HCUAI71	959492	446	169 - 312	10198		H0402: 2 and H0306: 1.		
HCUAK23	676289	447	57 - 185	10199	His-29 to Gly-34.	H0306: 1 and H0305: 1.		
HCUAK49	574256	448	155 - 292	10200	Thr-1 to Tyr-8, Thr-11 to Trp-16.	H0306: 2		
HCUAL07	953876	449	2 - 373	10201	Pro-12 to Arg-18, Gly-20 to Ala-35, Ala-44 to Ala-60, Gly-78 to Ser-84.	H0306: 1, H0402: 1, L0769: 1 and L0780: 1.		
HCUAM57	574375	450	143 - 274	10202		H0306: 2		
HCUAM95	727174	451	1 - 141	10203	Glu-37 to Asp-45.	S0114: 1 and H0306: 1.		
HCUAN44	574154	452	3 - 188	10204	Pro-6 to Trp-16.	H0306: 1 and S0053: 1.		
HCUAN49	577897	453	67 - 156	10205	Lys-7 to Val-12.	L0766: 3, H0556: 1, H0306: 1, H0264: 1, L0779: 1 and L0599: 1.		
HCUAN72	850140	454	3 - 143	10206	Val-20 to Tyr-26.	H0306: 1, H0087: 1 and S0216: 1.		
HCUAO03	924902	455	78 - 299	10207		H0306: 1, H0402: 1 and L0367: 1.		
HCUAO28	850062	456	189 - 347	10208	Leu-19 to Gly-28.	H0306: 1, H0402: 1 and L0599: 1.		
HCUAQ92	506688	457	184 - 291	10209	Pro-8 to Ser-14.	H0306: 2		
HCUAR07	953872	458	57 - 140	10210		H0306: 1 and H0402: 1.		
HCUAT07	953869	459	14 - 424	10211		H0306: 2 and L0599: 1.		
HCUAU02	920694	460	3 - 152	10212	Ser-14 to Trp-20.	H0306: 2		
HCUAU16	574193	461	28 - 135	10213		H0306: 2		
HCUAX57	934633	462	153 - 308	10214		H0306: 1, S0052: 1, S0216: 1, L0438: 1 and L0779: 1.		
HCUBB28	685493	463	81 - 239	10215		H0306: 1 and H0402: 1.		

HCUBB46	577238	464	142 - 282	10216	Lys-15 to Gly-23.	H0402: 2 and H0306: 1.
HCUBE26	810522	465	1 - 111	10217		H0306: 2
HCUBE27	574097	466	96 - 344	10218	Pro-42 to Ala-50, Pro-52 to Phe-59.	H0306: 2
HCUBE55	574203	467	3 - 284	10219	Phe-17 to Arg-28, His-59 to Gln-78.	H0306: 2
HCUBG79	781681	468	41 - 190	10220	Asn-5 to Asp-21, Ser-44 to Lys-50.	H0306: 2
HCUBG83	537501	469	20 - 151	10221	Ile-21 to Gly-27.	H0265: 1 and H0306: 1.
HCUBH45	575720	470	53 - 133	10222	Arg-14 to Lys-27.	H0306: 1 and H0402: 1.
HCUBI13	862161	471	83 - 226	10223		H0306: 2, H0402: 1, S0053: 1 and L0748: 1.
HCUBI14	574199	472	14 - 112	10224	Thr-15 to Thr-31.	H0306: 2
HCUBI15	881192	473	77 - 343	10225	Val-29 to Leu-43.	H0306: 3
HCUBI38	792415	474	206 - 502	10226	Gly-1 to Gly-17, Pro-20 to Ala-28, Pro-31 to Leu-44.	H0306: 2
HCUBI43	685512	475	40 - 129	10227	Ala-5 to Cys-14.	H0306: 2
HCUBI49	961748	476	27 - 95	10228		H0306: 2 and H0657: 1.
HCUBI74	574235	477	44 - 256	10229	Pro-5 to Gln-20, Glu-30 to Arg-35, Arg-43 to Arg-52.	H0306: 2
HCUBJ11	967484	478	3 - 272	10230	Arg-1 to Leu-8, Ile-12 to Pro-18, Glu-27 to Trp-39, Gly-66 to Ala-72.	H0306: 1 and H0402: 1.
HCUBJ42	574265	479	89 - 250	10231	Glu-12 to Gln-20.	H0306: 2
HCUBK01	917257	480	272 - 421	10232	His-3 to Ala-10, Leu-13 to Arg-18, Gln-20 to Gly-25.	H0306: 2
HCUBK36	850132	481	107 - 475	10233		H0306: 1 and H0576: 1.
HCUBK39	577234	482	262 - 504	10234	Pro-29 to Ser-34.	H0306: 1 and H0402: 1.
HCUBK46	574120	483	143 - 298	10235	Arg-32 to Leu-38.	H0306: 2
HCUBK49	574122	484	70 - 378	10236	Arg-17 to Asp-23, Cys-44 to His-50, Ile-72 to Glu-86,	H0306: 2

HCUBL12	739021	485	2 - 211	10237	Leu-91 to Lys-96. Ala-1 to Ser-10, Leu-39 to Glu-54.	H0305: 2, H0306: 1 and H0589: 1.
HCUBL65	574201	486	80 - 310	10238	His-6 to Thr-13, Pro-23 to Gly-36, Pro-38 to Ser-46.	H0306: 2
HCUBM86	577291	487	1 - 180	10239	Leu-1 to Arg-8.	H0306: 1 and S0140: 1.
HCUBN07	953879	488	26 - 118	10240		H0306: 2, H0305: 1 and L0783: 1.
HCUBN21	577287	489	103 - 345	10241	Gly-10 to Arg-17.	H0306: 1 and H0402: 1.
HCUBN38	971421	490	29 - 184	10242	Arg-1 to Cys-7, Val-44 to Lys-52.	H0306: 1 and H0402: 1.
HCUBN66	664536	491	1 - 147	10243	Asp-29 to Ser-40.	H0306: 1 and S0140: 1.
HCUBO08	959928	492	37 - 219	10244		H0306: 1 and H0402: 1.
HCUBP69	526757	493	64 - 147	10245	Leu-12 to Pro-28.	H0306: 2
HCUBP89	850016	494	52 - 318	10246	Thr-72 to Cys-78.	H0306: 1 and H0402: 1.
HCUBQ76	575352	495	71 - 166	10247		H0306: 1 and H0305: 1.
HCUBQ85	967074	496	1 - 219	10248	Ile-11 to Ala-18; Ser-41 to Arg-48.	H0306: 4, H0402: 2 and S0052: 1.
HCUBS58	522378	497	308 - 180	10249	Phe-4 to Cys-9, Asn-32 to Ser-42.	H0306: 1, L0622: 1 and H0057: 1.
HCUBS72	577286	498	50 - 199	10250	Asn-26 to Gly-38.	H0306: 1 and H0402: 1.
HCUBT02	920682	499	131 - 283	10251		H0306: 2
HCUBT94	574239	500	295 - 540	10252	Glu-18 to Phe-28, Pro-37 to Asn-42, Ser-49 to Cys-59.	H0402: 2, L0748: 2, H0306: 1, S0002: 1, L0749: 1 and L0755: 1.
HCUBV04	615547	501	31 - 159	10253	Lys-31 to Asn-37.	H0306: 1 and H0402: 1.
HCUBX57	506518	502	133 - 360	10254	Pro-32 to Leu-39.	H0306: 1 and H0402: 1.
HCUBZ57	529702	503	144 - 335	10255		H0306: 2
HCUBZ86	694720	504	2 - 160	10256		H0306: 1 and H0402: 1.
HCUBZ88	574096	505	158 - 310	10257	Pro-33 to Asp-41, Pro-43 to Lys-51.	H0306: 2, H0402: 1, L0768: 1 and L0758: 1.
HCUBZ96	506585	506	3 - 305	10258	Arg-1 to Asn-7, Pro-39 to Gly-52.	H0306: 1 and S0052: 1.
HCUCB20	574189	507	171 - 374	10259	Thr-11 to Gly-18.	H0306: 2

HCUCC20	573901	127 - 288	10260	Glu-31 to Cys-39.	H0306: 2		
HCUCC78	577129	29 - 304	10261		H0306: 1 and H0402: 1.		
HCUCC96	796530	2 - 241	10262	Gly-10 to Ala-15, Val-46 to Val-51, Thr-70 to Lys-77.	H0306: 1 and H0402: 1.		
HCUCD26	574098	2 - 175	10263	Glu-10 to Thr-15, Ala-29 to Ile-47.	H0306: 2		
HCUCD82	780047	151 - 297	10264	Glu-9 to Arg-14.	H0306: 2		
HCUCG21	671210	93 - 386	10265	Pro-12 to Ser-19.	H0306: 1 and H0416: 1.		
HCUCI43	715488	19 - 171	10266	Gly-12 to Gly-28.	S0052: 2 and H0306: 1.	1p33-p34	120260, 130500, 133200, 138140, 168360, 171760, 171760, 176100, 176100, 178300, 230000, 246450, 255800
HCUCJ90	967501	17 - 79	10267		H0306: 2		
HCUCT08	959910	2 - 286	10268		H0306: 1 and S0216: 1.		
HCUCT48	720905	128 - 259	10269	Glu-16 to Cys-24.	H0306: 2		
HCUCV13	574121	3 - 143	10270	Gln-1 to Trp-9.	H0306: 2		
HCUCV20	694398	264 - 67	10271		H0402: 2 and H0306: 1.		
HCUDA38	862089	96 - 356	10272		H0402: 2		
HCUDB13	578712	70 - 177	10273	Leu-1 to Cys-7, Leu-19 to Thr-28.	H0402: 2 and L0771: 1.		
HCUDC45	576566	128 - 361	10274	Pro-14 to Gly-22.	H0402: 2		
HCUDC79	576577	21 - 155	10275	Ser-38 to Leu-43.	H0402: 2		
HCUDD19	959706	149 - 583	10276	Gln-1 to Arg-9.	H0402: 2		
HCUDD43	850103	2 - 199	10277		H0402: 2		
HCUDD57	734883	77 - 385	10278	Arg-10 to Arg-20, Gly-26 to Trp-32, Ser-51 to Gly-56, Pro-68 to Ser-77.	H0402: 2 and L0748: 1.		
HCUDE23	953868	16 - 138	10279	Glu-7 to Asp-17.	H0402: 3, H0306: 1, L0717: 1 and L0754: 1.		
HCUDE38	850076	3 - 266	10280	His-1 to Trp-8, Pro-43 to Ala-48,	H0402: 2		

(SEQ ID column values: 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528)

HCUDE47	861150	529	389 - 802	10281	Leu-71 to Phe-76. Phe-13 to Ala-30, Thr-40 to Lys-45, Ser-57 to Pro-73, Lys-121 to Cys-138.	L0742: 7, L0439: 4, L0777: 2, H0341: 1, H0402: 1, H0439: 1, L0641: 1, L0803: 1, L0789: 1, S0216: 1 and L0741: 1.
HCUDF26	676949	530	121 - 282	10282	Gly-23 to Val-29, Gln-32 to Asn-39.	H0402: 1 and H0318: 1.
HCUDF33	577224	531	176 - 307	10283	Ile-31 to Gly-41.	L0748: 2, L0749: 2, H0306: 1 and H0402: 1.
HCUDF90	958449	532	2 - 214	10284	Ser-13 to Ile-18.	H0402: 1, H0305: 1 and H0589: 1.
HCUDH64	717894	533	1 - 405	10285	Lys-1 to Arg-11, Ala-34 to Arg-66, Gly-72 to Gly-79.	H0402: 2
HCUDH84	713524	534	30 - 269	10286	Ala-8 to Gly-13, Gly-32 to Gly-38.	H0402: 1 and H0444: 1.
HCUDJ91	861025	535	77 - 316	10287	Glu-5 to Ile-15, Ala-24 to Val-30.	H0402: 2 and H0179: 1.
HCUDL94	915821	536	2 - 367	10288		H0457: 2, H0402: 1, L0766: 1 and L0659: 1.
HCUDM23	462283	537	59 - 298	10289	Val-70 to Leu-75.	H0402: 1 and S0052: 1.
HCUDM66	506522	538	209 - 379	10290		H0306: 1 and H0402: 1.
HCUDN09	850101	539	466 - 353	10291		H0402: 2, H0139: 1, H0486: 1 and L0789: 1.
HCUDN14	862119	540	181 - 414	10292		H0402: 2
HCUDP19	578721	541	167 - 358	10293	Met-9 to Lys-34.	H0402: 2
HCUDP23	783051	542	141 - 458	10294	Lys-27 to Arg-32.	H0402: 2
HCUDP27	725155	543	101 - 331	10295		H0306: 1 and H0402: 1.
HCUDP82	578720	544	1 - 351	10296		H0402: 2
HCUDQ61	839959	545	124 - 330	10297	Glu-25 to Lys-41.	H0402: 2
HCUDS61	578705	546	2 - 262	10298	Lys-81 to Arg-87.	H0402: 2 and L0177: 1.
HCUDT62	747131	547	66 - 302	10299		H0402: 2
HCUDT65	915742	548	1 - 1857	10300		AR089: 1, AR061: 0 H0402: 1, L0017: 1, H0635: 1 and L0492: 1.

HCUDW37	859268	549	497 - 297	10301	Thr-1 to Lys-11.	H0402: 1 and S0002: 1.
HCUDW74	576240	550	244 - 116	10302	Lys-1 to Trp-6, Gln-23 to Cys-32, Pro-35 to Pro-43.	H0402: 2
HCUDX05	951165	551	1 - 51	10303		H0402: 1 and H0305: 1.
HCUDX14	571370	552	83 - 319	10304		S0114: 1 and H0402: 1.
HCUDZ25	678365	553	98 - 307	10305	Arg-6 to Arg-12, Ala-42 to Lys-70.	H0402: 2
HCUEA58	579029	554	96 - 317	10306	Glu-1 to Gly-6, Pro-26 to Cys-39.	H0306: 1, H0402: 1 and H0416: 1.
HCUEA63	745183	555	103 - 234	10307	Arg-14 to Glu-26, Leu-36 to Glu-42.	H0402: 2
HCUEA72	713040	556	1 - 255	10308	Gly-1 to Gly-6, Val-41 to Pro-46.	H0402: 2 and L0648: 1.
HCUEB62	579058	557	3 - 287	10309	Thr-81 to Trp-91.	H0306: 1 and H0402: 1.
HCUEC06	935769	558	107 - 3	10310		H0402: 2
HCUEC78	850066	559	19 - 195	10311	Pro-10 to Asp-21, Cys-45 to Thr-51.	H0402: 2
HCUED04	615410	560	67 - 330	10312	Cys-7 to Arg-18, Lys-34 to Ser-43, Pro-48 to Ile-55.	H0402: 2
HCUED66	576573	561	37 - 324	10313	Ser-11 to Lys-17, Arg-19 to Thr-29.	H0402: 2
HCUEE04	653118	562	1 - 303	10314		H0402: 2
HCUEE29	578709	563	36 - 206	10315		H0402: 2
HCUEE41	578715	564	3 - 221	10316	Phe-1 to Trp-10.	H0402: 2
HCUEE63	745184	565	3 - 113	10317	His-1 to Arg-12, Gly-25 to Thr-37.	H0402: 2
HCUEE66	578702	566	47 - 211	10318		H0402: 2
HCUEE83	578703	567	1 - 171	10319	Gly-1 to Lys-11.	H0402: 2
HCUEF90	578714	568	2 - 148	10320	His-7 to Pro-25.	H0402: 2
HCUEG58	784414	569	23 - 127	10321	Pro-7 to Asn-25.	H0402: 2
HCUEG90	578745	570	20 - 115	10322		H0402: 3
HCUEJ55	959552	571	19 - 111	10323		H0402: 2
HCUEJ69	757657	572	122 - 400	10324		H0402: 1 and H0271: 1.

HCUEK37	964869	573	135 - 344	10325	Ser-9 to Trp-15, Gln-22 to Tyr-35, Lys-41 to Gly-51.	H0402: 3
HCUEL28	706456	574	101 - 232	10326		H0306: 1 and H0402: 1.
HCUEL91	576568	575	2 - 118	10327	Ala-1 to Arg-29.	H0402: 2 and L0667: 1.
HCUEM23	576379	576	138 - 386	10328	Glu-1 to Tyr-8.	H0402: 2
HCUEM35	861545	577	86 - 319	10329	Pro-48 to Ala-69.	H0402: 2
HCUEM62	576575	578	1 - 195	10330	Phe-5 to Ala-10, Gly-58 to Ser-65.	H0402: 2
HCUEN34	706452	579	20 - 247	10331	Pro-10 to Arg-15.	H0402: 2
HCUEN58	738225	580	221 - 436	10332	Arg-19 to Ile-30.	H0402: 1 and S0002: 1.
HCUEO17	932118	581	99 - 242	10333		H0402: 4
HCUEO30	769203	582	2 - 262	10334		H0402: 2
HCUEO31	576551	583	55 - 171	10335		H0402: 2
HCUEO41	576524	584	3 - 461	10336	His-1 to Ser-7, Pro-29 to Gln-34, Lys-64 to Pro-76, Glu-83 to Asn-99, Glu-101 to Arg-109.	H0402: 2
HCUEO62	578713	585	271 - 399	10337	Gly-18 to Arg-28.	H0402: 2
HCUEO79	850090	586	3 - 167	10338	Pro-30 to Arg-35.	H0306: 1, H0402: 1, L0623: 1 and S0052: 1.
HCUEP01	913675	587	215 - 406	10339	Met-47 to Gly-58.	S0052: 2, H0341: 1, H0402: 1 and S0428: 1.
HCUEQ37	881486	588	81 - 362	10340	Gln-13 to Arg-34.	H0402: 3, H0306: 1 and H0486: 1.
HCUEQ56	751410	589	3 - 137	10341	His-1 to Gly-7, Gly-21 to Gly-29.	H0402: 1, L0776: 1, S0428: 1 and H0445: 1.
HCUES29	579033	590	107 - 229	10342		H0402: 5, H0486: 2 and H0306: 1.
HCUES34	850096	591	57 - 230	10343	Thr-43 to Lys-58.	H0402: 3
HCUES93	576498	592	54 - 356	10344	Gly-22 to Leu-27.	H0402: 2
HCUET13	657258	593	3 - 173	10345	Asp-37 to Leu-42, Pro-44 to Pro-56.	L0749: 3, H0402: 2, L0761: 2, L0803: 1 and L0790: 1.
HCUET27	506339	594	3 - 158	10346		H0306: 1 and H0402: 1.
HCUEU10	964857	595	1 - 105	10347		H0306: 1 and H0402: 1.

HCUEU20	970780	596	58 - 255	10348	Glu-25 to Gly-36, Asp-59 to Ser-64.	H0402: 3		
HCUEV08	959670	597	198 - 353	10349	Gln-3 to Ser-9.	H0402: 2		
HCUEV17	905316	598	801 - 1223	10350	Lys-43 to Ser-51.	AR051: 9, AR050: 2, AR054: 1		
HCUEV65	750364	599	1 - 168	10351		H0402: 2 and H0306: 1.		
HCUEV82	881370	600	55 - 237	10352		H0306: 1 and H0402: 1.		
HCUEW19	576513	601	3 - 221	10353	His-1 to Thr-7, Pro-9 to Gly-14, Cys-49 to Gly-54, Val-63 to Trp-70.	H0402: 2		
HCUEW58	850061	602	159 - 407	10354	Lys-8 to Gly-16, Ser-70 to Pro-76.	H0402: 2		
HCUEW71	881372	603	95 - 211	10355		H0306: 1, H0402: 1 and H0370: 1.		
HCUEX58	462365	604	1 - 201	10356		H0402: 2		
HCUEX74	953897	605	160 - 318	10357	Lys-26 to Leu-35.	H0402: 2		
HCUEY29	920419	606	232 - 390	10358	Glu-25 to Ala-32.	H0402: 3		
HCUEY48	576519	607	3 - 233	10359	Ser-34 to Gly-39.	H0402: 2		
HCUEZ88	576537	608	185 - 340	10360	Val-6 to Arg-14, Lys-25 to Pro-31.	H0402: 2		
HCUFA05	932116	609	135 - 329	10361		H0402: 2		
HCUFA38	675677	610	2 - 184	10362		S0298: 1, H0402: 1, L0520: 1 and L0758: 1.	4q25	137600, 189800, 217030, 248510, 600919, 601542
HCUFB15	660460	611	75 - 269	10363	Asp-10 to Tyr-18, Ile-53 to Arg-65.	H0402: 3		
HCUFB89	746601	612	69 - 200	10364		H0402: 2		
HCUFC22	951134	613	1 - 171	10365		AR050: 53, AR051: 51, AR054: 51, AR061: 2, AR089: 1 H0402: 2		
HCUFD09	625728	614	3 - 215	10366		H0402: 2, H0306: 1 and L0748: 1.		
HCUFG64	576574	615	2 - 91	10367		H0402: 3		

HCUFH32	920281	616	55 - 240	10368	Met-23 to Glu-30, Leu-46 to Glu-51.	H0402: 2
HCUFK94	722999	617	2 - 187	10369	Ala-1 to Gly-6, Pro-27 to Gly-41, Gly-44 to Arg-49, Gly-53 to Lys-62.	H0402: 2
HCUFL02	932429	618	3 - 425	10370	Thr-24 to His-29, Ala-31 to Ala-36, Pro-40 to Gly-53, Phe-132 to Glu-137.	H0402: 2
HCUFL15	575844	619	3 - 365	10371		H0402: 2
HCUFL35	677853	620	102 - 287	10372	Lys-1 to Trp-9, Glu-12 to Trp-19, Lys-27 to Gln-32, Gln-54 to Lys-62.	H0402: 1, L0521: 1, L0792: 1 and H0576: 1.
HCUFL77	575843	621	2 - 184	10373	Glu-10 to Ala-15, Ser-24 to Asn-36.	H0402: 2
HCUFM60	730707	622	153 - 446	10374	Arg-6 to His-12, Pro-15 to Ser-25, Pro-28 to Leu-34, Ala-50 to Glu-56.	H0402: 2
HCUFM65	576809	623	365 - 466	10375	Lys-1 to Thr-8, Arg-23 to Gly-31.	H0402: 2 and L0743: 1.
HCUFN65	741927	624	2 - 460	10376		L0745: 3 and H0402: 2.
HCUFP13	576582	625	1 - 198	10377	Gly-1 to Gly-6, Trp-32 to Thr-39, Leu-46 to Ser-57.	H0402: 2
HCUFP76	861703	626	146 - 289	10378		H0306: 1 and H0402: 1.
HCUFP91	575864	627	2 - 67	10379		H0402: 2
HCUFQ80	709357	628	323 - 469	10380	Arg-14 to Ser-29.	S0114: 1 and H0402: 1.
HCUFT26	575721	629	36 - 329	10381	Lys-18 to Phe-27, Arg-39 to Glu-47.	H0306: 1 and H0402: 1.
HCUFU36	575831	630	1 - 165	10382	Arg-50 to Leu-55.	H0402: 2
HCUFU49	953896	631	43 - 204	10383		H0402: 2
HCUFU58	725891	632	429 - 223	10384	Ser-19 to Ser-25, Glu-46 to Ile-56.	L0596: 2, H0402: 1 and H0179: 1.

HCUFU68	694410	633	161 - 325	10385		H0402: 3 and H0543: 1.
HCUFU91	828083	634	2 - 226	10386	Ser-29 to Ser-38.	H0402: 2 and H0306: 1.
HCUFV13	578459	635	260 - 370	10387		H0402: 1 and H0090: 1.
HCUFV44	576650	636	65 - 265	10388	Leu-1 to Arg-20, Arg-55 to Tyr-61.	S0134: 1, H0402: 1 and L0665: 1.
HCUFW41	850007	637	3 - 155	10389		H0402: 2, H0306: 1, L0659: 1 and L0599: 1.
HCUFW61	862086	638	3 - 230	10390		H0402: 1 and H0576: 1.
HCUFW75	575830	639	137 - 319	10391	Ser-7 to Trp-13, Arg-33 to Ala-38, Pro-40 to Ile-53.	H0402: 2
HCUFW83	577263	640	164 - 415	10392	Ser-18 to Asn-33.	H0306: 1 and H0402: 1.
HCUFX24	577266	641	3 - 188	10393		S0114: 1, H0402: 1, H0305: 1 and L0791: 1.
HCUFX74	850067	642	296 - 60	10394	Gly-1 to Ser-6.	H0306: 1, H0402: 1 and S0216: 1.
HCUFY27	669876	643	3 - 125	10395		H0306: 1 and H0402: 1.
HCUFY35	577130	644	3 - 176	10396	His-1 to Ser-9, Pro-29 to His-36, Ser-46 to Cys-51.	H0306: 1 and H0402: 1.
HCUFY40	967273	645	18 - 206	10397		H0402: 2
HCUFZ81	878882	646	31 - 360	10398	Glu-27 to Thr-35.	H0402: 2
HCUGB48	880730	647	173 - 361	10399		H0402: 1 and H0436: 1.
HCUGC96	575825	648	302 - 478	10400		L0754: 2, H0341: 1 and H0402: 1.
HCUGD15	660343	649	90 - 257	10401	Val-29 to Arg-35.	L0599: 3 and H0402: 2.
HCUGF18	666495	650	188 - 322	10402		H0402: 2
HCUGF61	741842	651	284 - 394	10403	Tyr-13 to Arg-19, Ser-26 to Phe-32.	H0306: 1 and H0402: 1.
HCUGG25	678112	652	31 - 177	10404	Ala-27 to Lys-32.	H0402: 2
HCUGH01	916600	653	180 - 329	10405	Trp-1 to Gly-7, Pro-28 to Ser-49.	H0402: 2 and L0748: 1.
HCUGH30	778735	654	124 - 285	10406		L0749: 2, H0402: 1, L0740: 1 and H0423: 1.
HCUGH34	706469	655	3 - 197	10407	Pro-1 to Gly-7, Ser-12 to Phe-20.	H0306: 1 and H0402: 1.

Clone	No.	Range	SEQ ID	Region	Homology
HCUGH83	862078	82 - 186	10408	Val-15 to Arg-27.	H0306: 1 and H0402: 1.
HCUGI29	584711	74 - 259	10409		H0402: 4, H0436: 1, L0748: 1 and L0749: 1.
HCUGI54	715310	45 - 167	10410		H0402: 2
HCUGJ35	850046	1 - 234	10411	Pro-18 to Ser-24.	H0402: 2
HCUGK10	850035	103 - 360	10412	Pro-46 to Ser-51.	H0306: 1 and H0402: 1.
HCUGK91	790218	3 - 149	10413		H0402: 1 and H0305: 1.
HCUGL14	658467	151 - 255	10414		H0402: 2
HCUGL84	496491	85 - 318	10415	Asn-6 to Gln-13, Asp-33 to Gly-38.	H0402: 2
HCUGM08	959488	1 - 321	10416	Ser-27 to Glu-34.	H0402: 2
HCUGN12	970727	6 - 131	10417	Asn-13 to Gly-20, Arg-29 to Asn-34.	L0749: 3 and H0402: 2.
HCUGO02	920154	160 - 354	10418	Leu-7 to Leu-13, Cys-20 to His-27, Leu-32 to Arg-37.	H0402: 2
HCUGP83	850029	1 - 159	10419		H0254: 1 and H0402: 1.
HCUGQ16	917269	139 - 357	10420		H0306: 2 and H0402: 1.
HCUGQ18	666474	134 - 316	10421	Pro-11 to Gly-16.	H0306: 1 and H0402: 1.
HCUGR38	706471	3 - 317	10422	Ser-2 to His-7, Pro-14 to Leu-20, Ala-33 to Gly-38.	AR089: 1, AR061: 0 H0402: 1 and H0305: 1.
HCUGR82	916538	296 - 439	10423	Tyr-6 to Trp-13.	H0402: 3 and L0529: 1.
HCUGT92	692730	43 - 255	10424	Ile-1 to His-8, His-11 to Asn-20, Pro-40 to Lys-50.	H0402: 2
HCUGU46	666815	120 - 212	10425		H0306: 1 and H0402: 1.
HCUGV38	850032	2 - 175	10426		H0402: 2
HCUGV60	496443	20 - 238	10427	Pro-19 to Glu-39, Glu-48 to Glu-58.	H0306: 1 and H0402: 1.
HCUGW04	960596	64 - 270	10428	Glu-1 to Gly-8.	H0402: 2
HCUGY26	953550	290 - 454	10429	Lys-15 to Lys-29.	L0748: 3, H0402: 2, H0075: 1 and H0439: 1.
HCUGZ15	792418	193 - 369	10430		H0402: 1 and H0444: 1.
HCUHA63	745094	75 - 239	10431		H0402: 1 and H0318: 1.

HCUHA74	576850	680	288 - 446	Val-15 to Ala-21, Lys-32 to Gly-38.	H0305: 2, H0589: 2 and H0402: 1.
HCUHB30	850018	681	81 - 245		H0306: 1, H0402: 1, L0556: 1, L0532: 1 and L0756: 1.
HCUHC25	920830	682	1 - 228	Leu-10 to Arg-26.	S0114: 1 and H0402: 1.
HCUHC41	712343	683	1 - 366	Gly-9 to Gly-15.	H0306: 1 and H0402: 1.
HCUHC45	671212	684	129 - 323	Pro-28 to Gln-34, Ser-42 to Ile-57.	H0306: 1 and H0402: 1.
HCUHC69	693007	685	26 - 139	Asn-1 to Glu-7.	H0306: 2 and H0402: 1.
HCUHD50	650854	686	264 - 410		H0402: 2
HCUHD55	705384	687	91 - 390	Ala-6 to Phe-19, Arg-37 to Trp-47, Ser-64 to Gly-72, His-79 to Arg-100.	H0341: 1, H0402: 1 and S0053: 1.
HCUHE23	675910	688	1 - 297	Gly-1 to Gln-6, Thr-54 to Gly-65.	H0306: 1 and H0402: 1.
HCUHE31	693311	689	196 - 354		H0306: 1, H0402: 1 and H0305: 1.
HCUHE43	754187	690	60 - 272		H0306: 1 and H0402: 1.
HCUHE48	835917	691	57 - 329		L0662: 2, S0114: 1, H0402: 1 and L0766: 1.
HCUHE76	666599	692	98 - 253		H0402: 2
HCUHF12	970685	693	240 - 446	Gly-14 to Arg-22, Gln-35 to Ala-41.	H0306: 1 and H0402: 1.
HCUHF41	878528	694	223 - 459	Pro-25 to Glu-30, Leu-71 to Gln-79.	AR051: 37, AR054: 25, AR050: 23
HCUHH14	658452	695	48 - 209	Gln-29 to Ile-36.	H0306: 1 and H0402: 1.
HCUHI34	923803	696	184 - 516	Gln-1 to His-13, Met-18 to His-24.	H0306: 1, H0402: 1 and L0764: 1.
HCUHI54	720378	697	63 - 242	Gln-4 to Arg-17.	H0402: 1 and H0486: 1.
HCUHJ12	970782	698	1 - 219	Pro-13 to Ser-22.	H0402: 2
HCUHJ15	577304	699	3 - 416	Leu-10 to Trp-18, Pro-31 to Gln-36, Asp-46 to Thr-57.	H0402: 2 H0306: 1 and H0402: 1.

HCUHJ30	966583	700	132 - 431	10452	Arg-26 to Ile-31, His-34 to Lys-39, Phe-47 to Arg-54.	H0402: 1, H0580: 1 and H0488: 1.
HCUHJ58	575796	701	158 - 364	10453	Pro-32 to Arg-37.	H0402: 2
HCUHM44	615198	702	2 - 109	10454	Lys-1 to Pro-26.	H0402: 2
HCUHM61	576561	703	37 - 327	10455	Ile-3 to Arg-10, Gly-59 to Lys-69.	H0402: 2
HCUHM94	736095	704	93 - 263	10456	Lys-1 to Gly-8.	H0402: 2
HCUHO60	576563	705	3 - 272	10457	Ser-1 to Gly-14, Val-17 to Pro-31, Lys-39 to Thr-45, Ser-51 to Glu-56, Ala-72 to Trp-85.	H0402: 2
HCUHP20	669737	706	53 - 196	10458	Ser-4 to His-16.	H0402: 2 and L0601: 1.
HCUHQ13	575803	707	133 - 318	10459		H0402: 2
HCUHQ33	575800	708	3 - 353	10460	Lys-43 to Tyr-53, Ser-89 to Arg-95.	H0402: 2
HCUHQ37	850010	709	76 - 270	10461	Leu-42 to Glu-55.	H0341: 1, H0402: 1 and L0748: 1.
HCUHQ74	765638	710	30 - 311	10462	Gly-7 to Arg-13, Gly-33 to His-39, Gly-46 to Val-51, Pro-75 to Lys-90.	H0402: 1 and H0444: 1.
HCUHS19	566809	711	48 - 200	10463	Leu-9 to Ser-17.	AR054: 29, AR051: 24, AR050: 13 H0402: 2, H0306: 1, L0659: 1 and L0599: 1.
HCUHS60	850009	712	29 - 190	10464	Pro-1 to Gly-13.	H0306: 1 and H0402: 1.
HCUHT21	577265	713	61 - 135	10465		H0306: 1 and H0402: 1.
HCUHT56	722649	714	110 - 379	10466	Leu-31 to Leu-37, Pro-39 to Val-60, Arg-80 to Gln-90.	H0402: 1 and H0445: 1.
HCUHU68	577795	715	225 - 1	10467	Lys-1 to Asp-7, Lys-48 to Ser-54.	H0254: 1 and H0402: 1.
HCUHW54	730716	716	1 - 114	10468	Gly-1 to Thr-11, Thr-24 to Pro-31.	H0402: 2

HCUHW59	739329	717	2 - 178	10469		H0402: 3
HCUHY49	577887	718	17 - 226	10470		H0306: 1 and H0402: 1.
HCUIA48	721719	719	2 - 124	10471	Lys-27 to Leu-40.	H0306: 1 and H0402: 1.
HCUIJ35	713818	720	339 - 482	10472	Glu-1 to Leu-12.	S0052: 2 and H0402: 1.
HCUIL80	577172	721	71 - 3	10473	Cys-11 to Gly-20.	H0306: 1 and H0402: 1.
HCUIM51	725724	722	3 - 290	10474		H0306: 1 and H0402: 1.
HCUIN18	666537	723	1 - 195	10475	Phe-11 to Ser-17, Pro-45 to Ala-53.	H0306: 1 and H0402: 1.
HCUIO82	883812	724	149 - 337	10476	Gly-10 to Arg-15.	H0306: 1 and H0402: 1.
HCVAC18	889480	725	88 - 192	10477		AR050: 9, AR054: 5, AR051: 0 H0300: 2
HCWAA20	669991	726	3 - 83	10478	Gln-1 to Lys-10.	H0305: 2
HCWAB01	921689	727	90 - 218	10479		H0305: 3
HCWAB44	669714	728	183 - 326	10480	Asp-1 to Lys-17.	H0305: 2
HCWAB50	724684	729	79 - 153	10481	Phe-18 to Val-24.	H0556: 1, H0305: 1 and S0002: 1.
HCWAB56	507283	730	17 - 157	10482		H0305: 2
HCWAB67	529658	731	53 - 124	10483		H0305: 2
HCWAB80	959937	732	1 - 153	10484		H0305: 2
HCWAB92	523447	733	43 - 159	10485	Ser-1 to Thr-6, Tyr-22 to Thr-27.	H0305: 2
HCWAC68	529653	734	2 - 205	10486	Gly-1 to Ser-18, Gly-30 to Thr-38.	H0305: 3
HCWAE16	660280	735	1 - 168	10487	Val-11 to Arg-18, Arg-49 to Arg-56.	H0305: 2
HCWAE50	655130	736	132 - 224	10488	Tyr-1 to Lys-14.	H0305: 3
HCWAF02	920993	737	101 - 391	10489	Pro-1 to Gln-8.	H0305: 2, H0589: 1 and S0428: 1.
HCWAF45	723452	738	2 - 148	10490	Arg-1 to His-10, Ile-22 to Lys-27.	H0305: 2 and L0774: 1.
HCWAF60	523354	739	56 - 268	10491		H0305: 2
HCWAF80	529498	740	2 - 223	10492	Ala-9 to Glu-15.	H0305: 2
HCWAG20	839796	741	91 - 228	10493	Ser-36 to Arg-46.	H0305: 2 and H0589: 2.
HCWAG70	529357	742	61 - 321	10494	Glu-1 to Gly-6,	H0305: 2 and H0589: 1.

HCWAH52	574929	743	24 - 221	10495	Thr-20 to Ser-29, Lys-46 to Arg-59.	H0305: 2
HCWAI93	523536	744	3 - 335	10496	Leu-20 to Gly-29, Thr-36 to Ser-43.	H0305: 2 and H0264: 1.
HCWAJ55	529361	745	1 - 81	10497	Pro-10 to Arg-20.	H0305: 2
HCWAJ58	740987	746	213 - 365	10498	Ser-4 to His-12.	H0305: 2
HCWAK51	751640	747	133 - 309	10499		H0305: 2
HCWAK80	702435	748	187 - 483	10500	Thr-21 to Ser-34, Tyr-46 to Phe-54.	S0114: 2, H0305: 2 and H0589: 1.
HCWAL14	861958	749	79 - 345	10501	Arg-3 to Asp-9.	H0305: 2
HCWAL22	579046	750	83 - 481	10502	Pro-39 to Asp-45, Pro-63 to Gly-71, Tyr-78 to Trp-91.	H0589: 2, H0402: 1 and H0305: 1.
HCWAL39	861893	751	55 - 315	10503	Lys-11 to Ser-21, Gln-26 to Asp-35, Gln-58 to Gln-66.	H0305: 4 and S0052: 1.
HCWAM08	960170	752	43 - 108	10504	Lys-12 to Gly-22.	H0305: 2 and H0589: 2.
HCWAM39	529349	753	1 - 183	10505		H0305: 1 and S0052: 1.
HCWAM49	849980	754	145 - 507	10506		H0305: 6 and H0589: 1.
HCWAN17	966646	755	333 - 133	10507	Phe-11 to Trp-17, Glu-33 to Val-46, Trp-48 to Leu-56.	H0402: 3, H0305: 2, S0114: 1 and H0589: 1.
HCWAN55	928116	756	57 - 389	10508	Pro-7 to Gly-13, Gly-41 to Asp-46.	H0305: 11
HCWAP63	523259	757	182 - 400	10509	Glu-22 to Ala-29.	H0305: 3
HCWAP66	889439	758	40 - 168	10510	Gln-18 to Ser-23.	AR050: 2, AR051: 1 H0305: 2
HCWAR05	932623	759	2 - 373	10511	Glu-9 to Lys-15, Pro-89 to Arg-100.	H0305: 2
HCWAR59	916461	760	2 - 391	10512	Gln-2 to Trp-18, Pro-46 to Val-64, Arg-70 to Arg-85, Asp-90 to Gln-102, Glu-115 to Gly-123.	H0305: 7 and H0589: 1.
HCWAR63	523255	761	187 - 357	10513	Gly-11 to His-19,	H0305: 4

HCWAR76	529652	762	283 - 501	10514	Gln-36 to Gln-44.	H0305: 3 and H0589: 2.
HCWAR84	529241	763	54 - 212	10515	Trp-12 to Thr-17.	H0305: 2
HCWAT16	523125	764	151 - 315	10516		H0305: 3
HCWAT59	529236	765	1 - 243	10517	Gly-4 to Ala-10, Gln-22 to Ser-29, Gln-35 to Ser-41, Ala-56 to Gly-71.	H0305: 4 and H0589: 1.
HCWAU26	849902	766	103 - 276	10518	Pro-9 to Gly-15.	H0305: 6
HCWAU89	589836	767	87 - 293	10519	Ala-1 to Pro-14, Pro-21 to Tyr-29, Phe-58 to Leu-69.	H0305: 3 and H0589: 1.
HCWAV75	849976	768	45 - 203	10520	Lys-8 to His-16.	H0305: 2
HCWAY41	542388	769	137 - 328	10521	Arg-7 to Pro-12, Gly-28 to Lys-38.	H0305: 9
HCWAZ16	529227	770	166 - 342	10522	Ser-17 to Trp-22.	H0305: 2
HCWAZ43	849892	771	68 - 289	10523	Val-28 to Arg-38.	H0305: 5 and H0589: 1.
HCWAZ66	523243	772	176 - 409	10524		H0305: 2
HCWAZ73	523299	773	51 - 296	10525	Thr-22 to Thr-27.	H0305: 3
HCWAZ91	529226	774	1 - 396	10526	Asp-30 to Asp-35.	H0305: 2 and H0589: 1.
HCWBA18	529224	775	61 - 135	10527		H0305: 2
HCWBA21	937631	776	88 - 276	10528	Phe-15 to Ser-21, Lys-50 to Asn-63.	H0305: 2 and L0361: 1.
HCWBA49	723359	777	29 - 184	10529	Ser-16 to Phe-24.	H0305: 4 and L0794: 2.
HCWBA50	835532	778	1 - 183	10530		H0305: 6
HCWBA55	529222	779	11 - 301	10531	Lys-1 to Cys-15.	H0305: 3 and H0589: 1.
HCWBA64	715579	780	90 - 278	10532	Glu-1 to Gly-12.	H0305: 4
HCWBB27	967045	781	87 - 299	10533	Lys-1 to Ser-6.	H0305: 2
HCWBB63	667283	782	3 - 323	10534	Arg-3 to Ser-9, Asp-29 to Ser-34.	AR061: 0, AR089: 0
HCWBC16	529350	783	1 - 222	10535	Gly-33 to Pro-41.	H0305: 3
HCWBC28	584778	784	3 - 278	10536	Glu-1 to Asn-23.	H0305: 2
HCWBC32	574909	785	202 - 333	10537		H0305: 2
HCWBC54	573188	786	10 - 108	10538		H0305: 2
HCWBC61	728666	787	87 - 239	10539		H0305: 2

Clone	Acc. No.	No.	Range	SEQ ID	Amino acid residues	Reference
HCWBC69	849971	788	1 - 126	10540	His-26 to Thr-31, Gly-36 to Tyr-42.	H0305: 2
HCWBC71	784052	789	1 - 48	10541		H0305: 2
HCWBC81	849974	790	1 - 261	10542		H0305: 2
HCWBD54	706513	791	18 - 251	10543	Tyr-10 to Ile-16.	H0305: 3
HCWBE25	529216	792	1 - 141	10544		H0305: 2
HCWBE37	542403	793	42 - 320	10545		H0305: 4 and H0589: 1.
HCWBE49	932196	794	220 - 420	10546	Gly-10 to Gly-17.	H0305: 8
HCWBE51	782317	795	220 - 411	10547		H0305: 2 and H0589: 2.
HCWBE58	773587	796	-2 - 175	10548	Gln-12 to Ser-17.	H0305: 2
HCWBE69	723717	797	27 - 242	10549		H0305: 2, S0114: 1 and L0752: 1.
HCWBE71	688011	798	295 - 405	10550		H0305: 5
HCWBE76	968515	799	1 - 171	10551	Thr-2 to Arg-56.	H0305: 2
HCWBG06	954670	800	1 - 72	10552		H0305: 2
HCWBG30	920530	801	2 - 301	10553	Ala-1 to Arg-8, Lys-25 to Thr-30, His-32 to Gln-37, Arg-46 to Ser-59, His-65 to Trp-71, Arg-76 to Arg-82.	H0305: 3
HCWBG40	676588	802	270 - 473	10554	Lys-1 to Arg-6.	H0305: 2 and H0589: 1.
HCWBG41	839014	803	95 - 280	10555	Arg-25 to Ser-34, Gly-40 to Ser-45.	H0305: 4
HCWBG43	689743	804	42 - 167	10556	Arg-34 to Pro-41.	H0305: 3
HCWBG77	529229	805	115 - 288	10557	Pro-13 to Lys-23.	H0305: 3
HCWBG91	789318	806	3 - 83	10558		H0305: 2
HCWBI17	954153	807	149 - 3	10559	Ser-17 to Asn-27.	H0305: 3
HCWBI24	529211	808	1 - 126	10560		H0305: 2
HCWBI37	967717	809	3 - 209	10561	Trp-10 to Gly-17, Pro-42 to Asp-48, Asp-57 to Asp-67.	H0305: 3 and H0589: 1.
HCWBI53	934909	810	105 - 305	10562	Arg-1 to Ser-13, Pro-25 to Pro-31.	H0305: 5 and H0589: 2.
HCWBI77	529238	811	32 - 229	10563	His-39 to Pro-46,	H0305: 2

HCWBI90	921653	812	10564	2 - 355	Cys-58 to Trp-66.	H0305: 3 and H0589: 1.
HCWBJ02	917300	813	10565	14 - 283	Lys-12 to Glu-22, Thr-49 to Thr-55.	H0305: 3
HCWBJ27	784524	814	10566	3 - 140		H0305: 4
HCWBJ61	849967	815	10567	42 - 269	Arg-8 to Asn-15, Ser-17 to Ser-25, Gln-28 to Leu-34, Pro-52 to Val-65.	H0305: 6
HCWBJ66	529228	816	10568	2 - 100	Arg-18 to Leu-27.	H0305: 2
HCWBJ75	935579	817	10569	245 - 421	Ser-1 to Arg-6, Leu-13 to Glu-26.	H0306: 1, H0402: 1, H0305: 1, L0605: 1 and H0543: 1.
HCWBJ81	849977	818	10570	2 - 124		H0305: 2
HCWBJ86	719521	819	10571	38 - 157	Ser-23 to Asn-28.	H0305: 3
HCWBL38	935481	820	10572	136 - 261		H0305: 3
HCWBL41	666457	821	10573	2 - 151	Tyr-3 to Ser-10.	H0305: 2
HCWBM04	861842	822	10574	133 - 342	Leu-48 to Leu-53.	H0305: 2 and H0589: 1.
HCWBM50	577712	823	10575	200 - 355	Gln-10 to Lys-22.	H0305: 2
HCWBM95	849932	824	10576	56 - 268		H0305: 5 and H0589: 1.
HCWBN06	924638	825	10577	2 - 373	Gly-1 to Asn-6.	H0305: 5
HCWBO10	842038	826	10578	104 - 244		H0305: 6
HCWBO23	964590	827	10579	2 - 148	His-2 to Pro-9.	H0305: 2
HCWBO94	574861	828	10580	87 - 344	Glu-10 to Gly-22, Leu-26 to Ala-35, Pro-52 to Ala-59, Ser-68 to Leu-74.	H0305: 2
HCWBP27	684336	829	10581	166 - 318	Cys-5 to Asp-17, Leu-19 to Ala-27.	H0589: 2 and H0305: 1.
HCWBP56	733662	830	10582	1 - 204	Ala-35 to Ser-40.	H0305: 2
HCWBP70	757467	831	10583	117 - 338	Tyr-22 to Trp-28.	H0305: 1 and H0589: 1.
HCWBP74	765881	832	10584	87 - 200		H0305: 3
HCWBP85	849969	833	10585	3 - 371	Ser-54 to His-61.	H0305: 12, H0589: 1 and L0369: 1.
HCWBQ03	920886	834	10586	3 - 311		H0305: 5
HCWBQ36	557873	835	10587	22 - 222	Leu-53 to Pro-67.	H0305: 2

HCWBQ70	706526	836	1 - 387	10588	Asp-6 to Phe-11, Ile-31 to Phe-37, Arg-82 to His-87, Glu-95 to Gln-101.	H0589: 2 and H0305: 1.
HCWBQ74	526537	837	43 - 201	10589	Gln-6 to Gly-12.	H0305: 2
HCWBQ88	527694	838	53 - 172	10590		H0305: 2
HCWBR06	527692	839	1 - 210	10591		H0305: 3 and L0777: 1.
HCWBR89	967726	840	74 - 352	10592		H0305: 3 and H0589: 1.
HCWBS66	574850	841	2 - 133	10593	Val-28 to Gly-44.	H0305: 2
HCWBS67	842037	842	191 - 382	10594	Phe-15 to Arg-24, Pro-46 to Thr-57.	H0305: 3
HCWBS96	954028	843	149 - 343	10595		H0305: 2 and H0556: 1.
HCWBT30	523249	844	3 - 353	10596		H0305: 3 and H0589: 1.
HCWBT31	720016	845	106 - 297	10597	His-33 to Lys-42.	H0589: 2, H0305: 1 and L0779: 1.
HCWBT48	527676	846	3 - 98	10598	Gly-1 to Gly-9.	H0305: 2
HCWBT86	927506	847	18 - 152	10599	Leu-9 to Leu-17, Gln-27 to His-34.	H0305: 1 and H0589: 1.
HCWBU09	527562	848	2 - 151	10600	Arg-14 to Gly-20.	H0305: 2 and S0134: 1.
HCWBU24	861864	849	92 - 337	10601		H0305: 5
HCWBU49	850014	850	195 - 1	10602	Arg-1 to Trp-13, Lys-24 to Cys-43.	AR050: 16, AR051: 12, AR054: 7 H0305: 2
HCWBU72	668350	851	219 - 371	10603	Tyr-17 to Tyr-22.	H0305: 1 and H0589: 1.
HCWBV09	746335	852	155 - 355	10604	Gly-20 to Glu-26, Ser-39 to Ser-53.	H0305: 3 and H0589: 1.
HCWBV51	725889	853	90 - 329	10605	Leu-7 to Cys-12.	H0305: 2
HCWBV96	796584	854	198 - 410	10606	Glu-8 to Thr-13, Ala-37 to Leu-50.	H0457: 2, H0305: 1, L0363: 1 and H0444: 1.
HCWBX63	527081	855	101 - 3	10607		H0305: 2
HCWBX65	970694	856	108 - 10	10608	Glu-1 to Leu-8.	H0305: 3
HCWBX67	506730	857	2 - 310	10609		H0305: 2
HCWBX75	767491	858	3 - 98	10610		H0305: 2
HCWBZ78	706521	859	194 - 391	10611		H0305: 4 and H0589: 1.
HCWCA51	849923	860	111 - 332	10612		H0305: 2 and H0445: 1.

HCWCB37	527683	861	1 - 210	10613		H0305: 3
HCWCB80	529234	862	2 - 163	10614		H0305: 2
HCWCB89	542340	863	188 - 75	10615		H0305: 5
HCWCC62	967306	864	183 - 344	10616		H0305: 3 and H0589: 1.
HCWCC77	527077	865	110 - 292	10617	Gly-11 to Gly-27.	H0305: 4 and H0589: 1.
HCWCC82	705347	866	2 - 355	10618		H0305: 2
HCWCE02	849968	867	2 - 232	10619	Ser-31 to Trp-43, Arg-48 to Gly-58.	H0305: 4
HCWCE21	523224	868	296 - 553	10620		H0305: 4 and L0731: 1.
HCWCE35	706489	869	27 - 215	10621		H0305: 2
HCWCE63	527678	870	17 - 256	10622	Leu-15 to Gln-20, Thr-26 to Arg-35.	H0305: 2
HCWCE69	757800	871	92 - 268	10623	Pro-14 to Gln-20, Arg-50 to Thr-59.	H0305: 2
HCWCE71	932549	872	62 - 205	10624		H0305: 3
HCWCE86	964648	873	167 - 403	10625	Ser-33 to Ser-38.	H0305: 8
HCWCF04	615626	874	1 - 51	10626	Gly-1 to Gly-7.	H0305: 2
HCWCF06	954580	875	3 - 218	10627		H0305: 2
HCWCF91	527558	876	1 - 276	10628		H0305: 3
HCWCF94	952684	877	1 - 186	10629	Gly-1 to Ala-13.	H0305: 1 and H0589: 1.
HCWCG31	527090	878	147 - 401	10630	Arg-1 to Val-11, Ala-75 to Gln-85.	H0305: 4, H0589: 2 and S0053: 1.
HCWCG62	575336	879	57 - 266	10631	Arg-6 to Pro-15.	H0305: 2
HCWCH01	920706	880	3 - 278	10632	Gly-17 to Thr-25.	H0305: 4
HCWCH22	675011	881	34 - 144	10633	Gly-4 to Leu-9, Leu-11 to Arg-16.	H0305: 2
HCWCH45	577704	882	3 - 305	10634	Val-23 to Glu-30, Asn-66 to Leu-73.	H0305: 2
HCWCI01	921586	883	1 - 168	10635	Met-30 to Pro-35.	H0305: 2
HCWCI38	556358	884	3 - 494	10636	Gly-17 to Ser-27.	H0305: 9 and H0589: 2.
HCWCI86	790718	885	60 - 161	10637		H0305: 3 and H0589: 1.
HCWCI85	529243	886	215 - 337	10638	Arg-14 to Pro-19.	H0305: 2
HCWCL10	888992	887	233 - 478	10639		H0305: 6
HCWCL62	715981	888	76 - 312	10640	Thr-12 to Asp-17, Ser-36 to Lys-59.	H0305: 1 and H0589: 1.

HCWCL67	751963	889	1 - 126			H0305: 3
HCWCM16	667392	890	2 - 142	Cys-29 to Ser-35.		H0305: 2
HCWCM65	529230	891	1 - 360	Ser-45 to His-58.		AR089: 3, AR061: 1 H0305: 2 and H0589: 1.
HCWCM96	963564	892	124 - 237			H0305: 3 and H0589: 1.
HCWCN25	518793	893	71 - 229	Ile-6 to Trp-12.		H0305: 2
HCWCN40	835584	894	60 - 203			H0305: 8 and H0589: 1.
HCWCN45	723418	895	277 - 378	Lys-1 to Tyr-15.		H0305: 1 and H0521: 1.
HCWCN61	924894	896	42 - 308			H0305: 3
HCWCN92	527088	897	2 - 175			H0305: 2 and L0753: 1.
HCWCO02	920876	898	22 - 261			H0305: 1 and H0589: 1.
HCWCO21	523225	899	2 - 157	Ala-7 to Ala-12, Arg-33 to Trp-44.		H0305: 2
HCWCO35	706490	900	93 - 374	Glu-47 to Pro-54, Ala-72 to Arg-79.		H0305: 1 and H0589: 1.
HCWCO54	558274	901	84 - 182			H0305: 3 and H0589: 1.
HCWCO63	557917	902	125 - 274	Gly-39 to Pro-44.		H0305: 3
HCWCO72	527546	903	91 - 213	Gly-17 to Gln-26.		H0305: 2
HCWCO77	772515	904	1 - 102	Gly-1 to Pro-7, Arg-25 to Ser-32.		H0305: 1 and H0589: 1.
HCWCP68	573148	905	1 - 162	Pro-6 to Phe-14.		H0305: 2, S0114: 1 and L0527: 1.
HCWCQ15	527688	906	191 - 325	Phe-28 to Pro-33.		H0305: 2
HCWCQ48	531423	907	3 - 71			H0305: 2
HCWCQ95	723610	908	2 - 112	Pro-2 to Arg-11.		H0305: 2
HCWCR31	693632	909	31 - 411		12q	AR089: 42, AR061: 4 H0305: 2, L0483: 1, L0764: 1, L0747: 1, L0756: 1 and L0758: 1.
HCWCR64	526482	910	3 - 185	Thr-1 to Lys-6, Arg-52 to Ala-57.		H0305: 2
HCWCS12	585202	911	7 - 237	Thr-22 to Trp-28, Lys-36 to Lys-47, Lys-71 to Pro-77.		H0305: 3
HCWCS51	921636	912	1 - 123			H0305: 3

HCWCT07	954070	913	104 - 271	10665		H0305: 2
HCWCT23	676336	914	30 - 191	10666	Gln-5 to Trp-13.	H0305: 3
HCWCT48	741925	915	198 - 365	10667		H0305: 2 and H0589: 1.
HCWCT85	527543	916	125 - 214	10668		H0305: 2
HCWCU01	921618	917	2 - 154	10669	Lys-16 to Asp-25.	H0305: 2, L0518: 1 and L0593: 1.
HCWCU17	577688	918	14 - 139	10670	Met-20 to Tyr-25.	H0305: 2
HCWCU32	725584	919	1 - 441	10671		AR051: 399, AR050: 312, AR054: 268
HCWCU57	764602	920	46 - 261	10672	Glu-23 to Val-28, Phe-67 to Arg-72.	H0305: 8 H0305: 3, L0805: 1 and H0543: 1.
HCWCU58	527695	921	3 - 269	10673	Lys-1 to Lys-7.	H0305: 2
HCWCU63	527541	922	2 - 175	10674		H0305: 3
HCWCU94	713416	923	3 - 272	10675		H0305: 1 and H0589: 1.
HCWCV01	921569	924	101 - 238	10676		H0305: 2
HCWCV09	861950	925	217 - 432	10677		H0305: 5
HCWCV16	861839	926	3 - 377	10678	Glu-6 to Asn-11, Pro-21 to Thr-26.	H0305: 3 and H0589: 1.
HCWCV58	966512	927	180 - 326	10679	Ser-1 to Arg-6, Pro-15 to Thr-27.	H0305: 1 and H0589: 1.
HCWCV75	527080	928	3 - 239	10680	Gly-14 to Trp-31.	H0305: 4
HCWCV85	966987	929	116 - 247	10681		H0305: 3
HCWCV93	792550	930	2 - 88	10682		H0305: 2
HCWCX18	574933	931	89 - 256	10683	Glu-1 to Ala-6, Gln-31 to Thr-36.	H0305: 5 and H0589: 1.
HCWCY16	507191	932	110 - 229	10684		H0305: 2
HCWCZ33	523265	933	3 - 200	10685		H0305: 9
HCWDB74	521894	934	76 - 279	10686	Thr-23 to Ser-29.	H0305: 3
HCWDB94	531417	935	77 - 277	10687		H0305: 2
HCWDD15	660571	936	2 - 277	10688		H0305: 1, L0664: 1 and H0444: 1.
HCWDD60	575555	937	2 - 130	10689		H0305: 4
HCWDG46	715509	938	65 - 160	10690	Lys-3 to Leu-15.	H0305: 2
HCWDG49	861951	939	3 - 461	10691	Phe-16 to Arg-24,	H0305: 2

Clone		Number	Range	SEQ ID	Description	Info
HCWDH65	574250	940	297 - 479	10692	Ser-35 to Arg-41.	H0305: 2
HCWDH85	574262	941	53 - 181	10693		H0305: 2
HCWDH92	790618	942	16 - 198	10694	Leu-18 to His-23.	H0305: 1 and H0589: 1.
HCWDJ37	849867	943	159 - 329	10695	Gln-3 to Ser-9.	H0305: 5
HCWDI43	527685	944	32 - 274	10696	Arg-24 to Trp-40, Phe-49 to Ser-54, Gly-63 to Trp-71.	H0305: 2
HCWDI64	924632	945	72 - 185	10697		H0305: 2
HCWDI72	573034	946	49 - 177	10698	Arg-16 to Thr-27, Leu-34 to Pro-43.	H0305: 2
HCWDI79	526765	947	18 - 143	10699		H0305: 3
HCWDI82	671636	948	2 - 208	10700	Pro-10 to Gly-15, Ala-38 to Arg-43, Ser-52 to Pro-59.	H0305: 2
HCWDI89	953750	949	248 - 460	10701	Ser-1 to Gln-10, Pro-49 to Lys-59.	H0305: 3, L0749: 3, L0748: 2, H0589: 1, L0481: 1, L0772: 1 and L0589: 1.
HCWDJ92	733422	950	34 - 189	10702	Glu-45 to Ala-52.	H0305: 2
HCWDJ21	524780	951	97 - 279	10703		H0305: 3
HCWDJ23	527555	952	1 - 360	10704	Thr-2 to Ala-10.	AR089: 0, AR061: 0
HCWDJ31	531418	953	91 - 240	10705	Gly-1 to Ser-12, Ser-19 to Gly-27.	H0305: 2
HCWDJ45	523227	954	49 - 435	10706	Glu-1 to Gln-6, Pro-21 to Trp-26.	H0305: 3
HCWDJ89	697736	955	141 - 422	10707	Asn-5 to Thr-13.	H0589: 2, H0305: 1 and H0444: 1.
HCWDL19	669721	956	55 - 222	10708	Ser-19 to Glu-36.	H0305: 3 and L0766: 1.
HCWDL45	889416	957	118 - 282	10709	Ala-33 to Ile-42.	AR089: 16, AR061: 4, H0305: 6 and S0052: 1.
HCWDL68	752320	958	2 - 175	10710	Ala-1 to Asn-8, Ser-44 to Arg-51.	H0305: 1 and S0052: 1.
	752857	9549	418 - 56	19301		
HCWDM02	920563	959	155 - 379	10711	Ser-44 to Asn-49.	H0305: 2
HCWDM06	935898	960	1 - 189	10712		H0305: 3

HCWDM07	953742	202 - 480	961		H0305: 3
HCWDM14	849962	85 - 291	962		H0305: 5 and L0375: 1.
HCWDM23	676215	142 - 303	963	Asn-5 to Gln-14.	H0305: 2 and H0589: 1.
HCWDM60	754785	80 - 337	964		H0305: 4 and H0589: 1.
HCWDM79	578967	2 - 274	965	Glu-53 to Gly-58.	H0305: 1 and H0589: 1.
HCWDN15	557862	92 - 205	966		H0305: 2 and L0020: 1.
HCWDN60	861882	1 - 285	967	Gly-3 to Phe-12, Ala-70 to Ala-77.	H0305: 2 and L0657: 1.
HCWDO11	967364	162 - 353	968	Pro-22 to His-31.	H0305: 3
HCWDO56	961273	106 - 369	969	Glu-19 to Gly-24, Ala-39 to Leu-45, Pro-56 to Trp-64.	H0305: 13 and H0253: 1.
HCWDO65	920523	66 - 314	970	Asp-18 to Leu-27, Lys-51 to Lys-62.	H0305: 4
HCWDP85	747141	162 - 296	971	Asn-14 to Lys-25.	H0305: 2
HCWDQ35	573577	2 - 286	972	Thr-11 to Thr-16.	H0305: 2
HCWDR01	839104	3 - 479	973	Arg-78 to Lys-97.	AR089: 1, AR061: 0 H0305: 4 and H0589: 1.
HCWDR42	529354	95 - 298	974		H0305: 2
HCWDR63	849899	249 - 503	975	Asp-35 to Pro-52.	H0305: 3 and H0580: 1.
HCWDR86	527690	2 - 253	976		H0305: 4 and L0748: 1.
HCWDR89	787025	114 - 296	977	Arg-1 to Asp-7.	H0305: 2
HCWDS10	880973	210 - 422	978		H0305: 3
HCWDS19	418009	2 - 217	979	Ala-6 to Ser-11.	H0305: 2
HCWDS26	684696	81 - 305	980	Phe-5 to Gly-10, Pro-32 to Cys-40.	H0305: 1 and H0589: 1.
HCWDS40	523301	182 - 439	981	Arg-1 to Thr-8.	H0305: 5 and H0589: 1.
HCWDS41	669754	3 - 365	982	Asp-8 to Ala-21, Pro-23 to Ala-32, Leu-34 to Val-49.	H0305: 3
HCWDS48	861849	163 - 438	983	Arg-10 to Gln-25, Ser-69 to Phe-84.	H0305: 2, H0589: 1 and L0520: 1.
HCWDS52	771881	46 - 204	984	Tyr-23 to Lys-29.	H0305: 2 and H0589: 1.
HCWDS55	861943	26 - 454	985	Arg-4 to Gly-10, Ser-13 to Asn-18.	H0305: 3

Clone	Number	Range	SEQ	Amino acid description	H0305 reference	
HCWDS59	934914	248 - 430	986	Gln-29 to Val-36.	H0305: 2 and H0589: 2.	
HCWDS61	741992	136 - 393	987	Arg-9 to Arg-19.	H0305: 2	
HCWDS83	612257	181 - 492	988		H0305: 2	
HCWDS91	557931	98 - 445	989	Asn-8 to Gly-13.	H0305: 2	
HCWDS94	959650	3 - 191	990	Ser-2 to Ser-7, Ala-16 to Ala-29.	H0305: 8	
HCWDT12	573487	146 - 301	991	Tyr-34 to Cys-40.	H0305: 2	
HCWDT84	542238	3 - 242	992	His-1 to Ala-16, Gly-22 to Cys-29.	H0305: 7	
HCWDV17	974478	32 - 697	993	Ala-144 to Glu-151, Thr-162 to Thr-168.	AR089: 12, AR061: 6, H0305: 4	
HCWDV82	529210	1 - 138	994	Arg-1 to Cys-10, Gly-25 to Ala-35.	H0305: 2	
HCWDW05	852997	108 - 212	995	Ser-1 to Trp-9, Arg-14 to Glu-26.	H0305: 1 and H0589: 1.	
HCWDW08	861936	2 - 193	996		H0305: 4	
HCWDW13	523236	114 - 317	997		H0305: 4	
HCWDW17	849938	3 - 224	998	Leu-57 to Arg-69.	H0305: 2	
HCWDW29	849939	26 - 202	999	Ser-1 to Ser-9.	H0305: 2	
HCWDW33	573554	16 - 141	1000		H0305: 2	
HCWDW42	462405	170 - 370	1001		H0305: 2	
HCWDW43	714423	74 - 229	1002	His-3 to Ala-10.	H0305: 2	
HCWDW57	927656	3 - 167	1003		H0305: 3	
HCWDW61	574859	115 - 273	1004	Leu-2 to Gln-7, Pro-36 to Gly-47.	H0305: 6	
HCWDW62	849960	360 - 599	1005		H0305: 7 and H0589: 2.	21q11.1
HCWDW73	861934	46 - 303	1006		H0305: 3	
HCWDW74	952698	162 - 329	1007	Ser-8 to Gly-13.	H0589: 2 and H0305: 1.	
HCWDW78	773698	1 - 270	1008	Asp-65 to Leu-71.	H0305: 2	
HCWDW90	529233	19 - 165	1009	Lys-18 to Gln-24, Ala-33 to Ser-39.	H0305: 2	
HCWDW93	574155	1 - 150	1010	Thr-7 to Cys-12, Thr-28 to Asp-36, Phe-39 to Asn-48.	H0305: 2	
HCWDW94	753166	489 - 824	1011		H0305: 2, H0589: 1 and	

						H0543: 1.
HCWDW96	975401	1012	1 - 66	10764	Met-2 to Asn-12.	H0306: 4 and H0305: 3.
HCWDX19	523233	1013	264 - 461	10765		H0305: 3 and H0589: 1.
HCWDX22	967361	1014	69 - 242	10766	Val-19 to Pro-25, Thr-31 to Leu-44.	H0305: 3 and H0589: 1.
HCWDX36	861932	1015	69 - 323	10767	Pro-5 to His-12, Arg-52 to His-57, His-64 to Asp-69.	H0305: 2, L0749: 2 and H0589: 1.
HCWDX39	573574	1016	48 - 239	10768	Asn-1 to Gly-19, His-21 to Thr-26.	H0305: 2
HCWDX52	661568	1017	346 - 549	10769	Lys-1 to Ile-7, Gly-33 to Tyr-44.	H0305: 3 and H0589: 1.
HCWDX65	920877	1018	1 - 213	10770	Gly-1 to Gly-9, Arg-53 to Asn-60.	H0305: 6
HCWDX76	932614	1019	2 - 238	10771	Ala-1 to Asp-6, Ala-8 to Gly-14.	H0305: 3
HCWDX85	861933	1020	106 - 342	10772		H0305: 2 and H0591: 1.
HCWDY47	573557	1021	70 - 273	10773		H0305: 3
HCWDZ13	657398	1022	3 - 248	10774		H0305: 6
HCWDZ89	576697	1023	33 - 164	10775		H0305: 2 and H0589: 1.
HCWEA30	681277	1024	2 - 187	10776	Lys-14 to Gln-19, Phe-28 to Trp-38, His-41 to Asp-56.	H0305: 1 and H0589: 1.
HCWEA65	849918	1025	87 - 218	10777		H0305: 2
HCWEA77	666180	1026	6 - 314	10778	Thr-1 to Leu-8, Arg-25 to Arg-33.	H0305: 1, H0589: 1 and H0318: 1.
HCWEA78	697596	1027	3 - 308	10779	Asp-29 to Trp-35, Lys-37 to Thr-48, Asp-93 to Pro-99.	H0589: 3 and H0305: 1.
HCWEA82	719028	1028	68 - 214	10780		H0305: 2
HCWEA84	506718	1029	2 - 223	10781	Val-16 to Ile-24, Lys-40 to His-47.	H0305: 2
HCWEA86	574858	1030	87 - 179	10782		H0305: 2
HCWEB11	975408	1031	2 - 79	10783	Glu-1 to Lys-7.	H0305: 6, H0306: 1 and H0402: 1.
HCWEB25	925102	1032	2 - 226	10784	Arg-22 to Trp-28.	H0305: 3, S0218: 1 and

HCWEB28	932114	1033	129 - 353	10785	Gly-41 to Glu-47.	H0264: 1.
HCWEB33	925286	1034	144 - 362	10786		H0305: 6
HCWEB37	849854	1035	29 - 256	10787		H0305: 5
HCWEB40	514584	1036	210 - 1	10788	Leu-7 to Leu-13, Ser-21 to His-27.	H0305: 3
	711336	9550	23 - 238	19302	Gln-14 to His-20, Thr-27 to Asp-43.	
HCWEB56	527051	1037	169 - 390	10789		H0305: 3 and H0589: 3.
HCWEB71	573147	1038	145 - 342	10790	Leu-8 to Gly-20, Asp-28 to Tyr-33.	H0305: 3
HCWED11	948689	1039	42 - 221	10791	Thr-35 to Thr-47.	H0305: 2, H0589: 1 and L0752: 1.
HCWED13	573413	1040	232 - 360	10792		H0305: 5
HCWED61	971865	1041	2 - 289	10793		H0305: 1, L0363: 1, H0187: 1, H0576: 1 and L0748: 1.
HCWEE02	920544	1042	2 - 202	10794		H0305: 2
HCWEE03	924743	1043	72 - 404	10795		H0305: 3 and L0779: 1.
HCWEE07	953731	1044	149 - 304	10796	Gly-6 to Gly-12.	H0305: 3
HCWEE22	572960	1045	2 - 352	10797	Pro-37 to Gly-48.	H0305: 3
HCWEE74	738264	1046	2 - 319	10798	Ala-9 to Pro-17.	H0305: 2
HCWEE76	770169	1047	121 - 291	10799	Gln-3 to Cys-14.	H0305: 3
HCWEE83	781302	1048	3 - 227	10800	Ala-1 to Asp-13.	H0305: 2
HCWEF56	573570	1049	3 - 461	10801	Pro-42 to Asp-48.	H0305: 4
HCWEF91	849919	1050	21 - 293	10802	Pro-1 to Arg-8, Arg-18 to Ser-42.	H0305: 3
HCWEF92	573568	1051	78 - 362	10803	Phe-8 to Gln-13.	H0305: 3
HCWEF95	526766	1052	1 - 297	10804		H0305: 5
HCWEG09	523251	1053	2 - 292	10805	Thr-12 to Thr-17.	H0305: 3
HCWEG23	531421	1054	112 - 354	10806	Asp-18 to Gln-24, Pro-42 to Asp-49, Pro-76 to Tyr-81.	H0305: 3
HCWEG31	693687	1055	2 - 247	10807	Ser-13 to Val-18, Pro-43 to Trp-49.	H0305: 2
HCWEG47	574191	1056	84 - 215	10808	Gly-34 to Leu-40.	H0305: 2

HCWEG51	964642	1057	69 - 203	10809	Glu-3 to Ile-19, Ser-33 to Glu-42.	H0305: 5
HCWEG69	948693	1058	3 - 248	10810		H0305: 3
HCWEG70	881254	1059	177 - 443	10811		H0305: 2
HCWEG86	572980	1060	36 - 371	10812	Gln-43 to Cys-52, Pro-76 to Arg-81, Ser-87 to Ala-94, Arg-96 to Arg-112.	H0305: 1 and H0589: 1.
HCWEH27	527050	1061	65 - 403	10813	Leu-1 to Asn-6, His-48 to Ser-59, Cys-76 to Gly-83.	H0305: 6
HCWEH53	967056	1062	66 - 320	10814		H0305: 3 and H0589: 1.
HCWEH76	574187	1063	171 - 332	10815	Thr-9 to Thr-15, Ser-32 to Leu-46.	H0305: 2
HCWEH93	933146	1064	3 - 326	10816	His-1 to Thr-12.	H0305: 3
HCWEH94	667919	1065	757 - 284	10817		H0305: 3 and H0255: 1.
HCWEI19	948690	1066	178 - 309	10818		AR089: 4, AR061: 2 AR089: 2
HCWEI30	666625	1067	67 - 273	10819	Val-11 to Leu-18.	H0305: 2
HCWEI43	573508	1068	101 - 244	10820	Trp-8 to Thr-14, Phe-20 to Pro-26.	H0305: 2
HCWEI45	576852	1069	1 - 99	10821		H0305: 2 and H0423: 1.
HCWEI78	861918	1070	1 - 267	10822		H0305: 1 and H0589: 1.
HCWEI80	573534	1071	11 - 220	10823		H0305: 2
HCWEI83	529351	1072	1 - 273	10824	Pro-22 to Ser-27, Pro-30 to Thr-36, Arg-43 to Glu-55, Pro-57 to Cys-63, Pro-76 to Ala-86.	H0305: 2 and H0589: 1.
HCWEI91	529650	1073	3 - 323	10825	Thr-28 to Ala-40, Lys-91 to Gln-99.	H0305: 3
HCWEJ02	920488	1074	155 - 463	10826	Ser-1 to Met-15, His-17 to Arg-38.	H0305: 2 and H0589: 1.
HCWEJ08	959734	1075	202 - 438	10827	Pro-18 to Ala-26.	H0305: 5 and H0589: 2.
HCWEJ22	954137	1076	1 - 297	10828		H0305: 4 and H0589: 1.
HCWEJ26	576717	1077	131 - 379	10829	Pro-41 to Pro-46.	H0305: 2, L0764: 2, L0590:

						2, H0650: 1 and H0486: 1.
HCWEJ43	573526	1078	76 - 333	10830	Thr-2 to Arg-9.	H0305: 3
HCWEJ69	757674	1079	11 - 214	10831		S0114: 1, H0305: 1, L0761: 1 and L0662: 1.
HCWEJ91	572857	1080	94 - 228	10832		H0305: 3
HCWEK59	855734	1081	1 - 231	10833		H0305: 2
HCWEK74	573134	1082	188 - 484	10834	Ser-33 to Leu-40.	H0305: 3
HCWEK80	574157	1083	1 - 324	10835	Asp-25 to Gly-32, Ser-40 to His-45, Leu-51 to Gly-56.	H0305: 3
HCWEK84	572843	1084	123 - 254	10836	Pro-6 to Cys-19, Glu-26 to Gln-34.	H0305: 2 and H0589: 1.
HCWEK89	861914	1085	37 - 258	10837	Lys-1 to Ser-8.	H0305: 2
HCWEL01	916972	1086	1 - 249	10838	Asp-1 to Leu-12, Asn-34 to Ser-39, Pro-77 to Arg-82.	H0305: 2
HCWEL08	881309	1087	1 - 153	10839	Ala-18 to Arg-23, Tyr-40 to Gly-45.	H0305: 2
HCWEL18	827387	1088	1 - 279	10840	Asp-45 to Arg-52.	H0305: 7
HCWEL27	572846	1089	67 - 192	10841		H0305: 2
HCWEL47	523304	1090	126 - 296	10842		H0305: 5 and H0589: 2.
HCWEL52	577417	1091	23 - 463	10843	Thr-7 to Val-15, Lys-56 to Leu-63, Ser-70 to Gly-77.	H0305: 1 and H0271: 1.
HCWEL55	572951	1092	155 - 295	10844		H0305: 2
HCWEL96	529223	1093	1 - 192	10845		H0305: 3
HCWEM10	968044	1094	131 - 232	10846	Asp-1 to Trp-9, Val-11 to Lys-21.	S0218: 1 and H0305: 1.
HCWEM37	573151	1095	3 - 248	10847		H0305: 2 and H0589: 1.
HCWEM51	920887	1096	3 - 392	10848	Gln-73 to Glu-82.	H0305: 3 and H0589: 1.
HCWEN20	529237	1097	1 - 342	10849	Gly-71 to Leu-76.	H0305: 4
HCWEN86	573527	1098	1 - 324	10850		H0305: 3
HCWEP18	913670	1099	304 - 414	10851	Lys-23 to Leu-32.	H0305: 7 and H0589: 1.
HCWEP34	523238	1100	107 - 448	10852	Lys-38 to Met-43.	H0305: 6
HCWEP39	660232	1101	3 - 473	10853	His-1 to Leu-8.	H0305: 5

HCWEP40	506759	1102	34 - 291	10854	Glu-1 to Lys-6.	H0305: 2
HCWEP43	921346	1103	48 - 239	10855	Arg-29 to Cys-39.	H0305: 4
HCWEQ01	861910	1104	110 - 208	10856		H0305: 3
HCWEQ14	908245	1105	1 - 177	10857	Leu-43 to Tyr-48.	AR089: 39, AR061: 8 H0305: 3
HCWEQ15	660520	1106	74 - 298	10858		H0305: 2
HCWEQ27	849860	1107	120 - 404	10859	Gly-25 to Glu-34, Lys-55 to Gln-62, Ser-64 to Asn-71, Asn-74 to Pro-79.	H0305: 2 and H0589: 1.
HCWEQ37	849985	1108	1 - 180	10860		H0305: 2
HCWEQ89	529240	1109	169 - 324	10861	Thr-13 to Trp-19, Thr-29 to Arg-35.	H0305: 3
HCWER22	674807	1110	26 - 103	10862	Val-3 to Glu-10.	H0305: 2
HCWER37	849916	1111	1 - 381	10863	Asp-6 to Gly-11.	H0305: 3
HCWER61	574921	1112	1 - 102	10864		H0305: 2
HCWER81	574167	1113	268 - 378	10865	Phe-3 to Asn-9.	H0305: 2
HCWES03	921933	1114	198 - 380	10866	His-1 to Ala-6.	H0305: 2 and S0052: 1.
HCWES06	935862	1115	41 - 148	10867	Arg-7 to Thr-17, Pro-29 to Glu-35.	H0305: 1 and H0589: 1.
HCWEW45	571355	1116	1 - 207	10868	Arg-1 to Gly-6, Glu-18 to Arg-51.	H0305: 2 and H0486: 1.
HCWEW76	861966	1117	202 - 372	10869		H0305: 4 and L0517: 1.
HCWEW77	664922	1118	213 - 419	10870	Ile-1 to Ser-6, Asp-11 to Thr-19.	H0305: 4
HCWEX05	928121	1119	64 - 339	10871	Cys-11 to Ala-17.	H0305: 2
HCWEX40	574940	1120	85 - 246	10872	Gln-26 to Lys-37, Glu-43 to Ser-52.	H0305: 2
HCWEX59	709560	1121	83 - 349	10873	Tyr-11 to Phe-17.	H0305: 8 and H0589: 1.
HCWEX66	731772	1122	163 - 294	10874	Glu-12 to Ser-19.	H0305: 2
HCWEY07	953701	1123	2 - 424	10875	Ala-1 to Ser-8, Arg-52 to Asn-58.	H0305: 5
HCWEY33	702597	1124	76 - 432	10876		H0305: 2
HCWEY34	954142	1125	1 - 246	10877	Pro-2 to Gly-12.	H0305: 3
HCWEY84	952692	1126	72 - 296	10878	Cys-25 to Val-31,	H0305: 2 and H0589: 1.

HCWEY88	785508	1127	24 - 308	10879	Lys-37 to Arg-42.	H0305: 2
HCWFA14	925301	1128	42 - 311	10880	Val-20 to Glu-25. Ser-58 to His-63, Leu-65 to Cys-75.	H0305: 13 and H0589: 2.
HCWFA65	573193	1129	95 - 250	10881		H0305: 2
HCWFA88	578943	1130	87 - 281	10882		H0305: 2
HCWFA89	574370	1131	12 - 248	10883		S0053: 2 and H0305: 1.
HCWFC05	932194	1132	1 - 198	10884	Gly-1 to Pro-7.	H0305: 2
HCWFC17	573186	1133	183 - 380	10885	Gly-9 to Glu-14, Gln-16 to Glu-22, Leu-27 to Ser-40.	H0305: 2
HCWFC65	883787	1134	3 - 287	10886	His-1 to Gly-9.	H0305: 3
HCWFD07	953700	1135	295 - 534	10887	Gly-59 to Gln-65.	H0305: 2 and H0589: 1.
HCWFD19	574915	1136	1 - 279	10888	Pro-24 to Cys-29.	H0305: 2
HCWFD29	573381	1137	1 - 222	10889		H0305: 2
HCWFD47	671946	1138	123 - 296	10890		H0305: 3 and L0666: 1.
HCWFD64	954575	1139	1 - 111	10891	Ala-1 to Arg-8.	H0305: 4 and L0748: 1.
HCWFE06	935856	1140	209 - 391	10892	Lys-20 to Ile-25.	H0305: 2
HCWFE18	573445	1141	2 - 112	10893	Thr-16 to Lys-31.	H0305: 2
HCWFF41	849978	1142	3 - 149	10894	Glu-2 to Gly-24.	H0305: 2
HCWFF88	506577	1143	41 - 187	10895	Pro-1 to Gly-6, Ala-41 to Leu-47.	AR089: 15, AR061: 6 H0305: 2
HCWFJ65	578936	1144	1 - 126	10896	Leu-13 to Arg-24.	H0305: 2
HCWFJ72	856908	1145	267 - 482	10897		H0255: 1, H0305: 1, H0589: 1, H0635: 1 and L0384: 1.
HCWFK16	849988	1146	3 - 161	10898	Val-2 to Thr-7.	H0305: 2
HCWFK20	575696	1147	14 - 238	10899		H0305: 2
HCWFK35	916795	1148	3 - 260	10900	Val-3 to Arg-10.	H0305: 7, H0255: 1 and L0766: 1.
HCWFK57	861907	1149	13 - 276	10901	Thr-72 to Asn-80.	AR089: 1, AR061: 1 H0305: 3 and H0589: 1.
HCWFK73	761655	1150	2 - 184	10902	Pro-50 to Lys-56.	H0305: 2
HCWFK91	954008	1151	2 - 157	10903	Glu-35 to Thr-47.	H0305: 3
HCWFL10	964853	1152	2 - 331	10904	Pro-1 to Gly-7, Arg-48 to Ala-55,	H0305: 2

HCWFL31	953579	1153	3 - 179	10905	Ser-66 to Asp-87.	H0305: 3 and L0518: 1.		
HCWFL45	577950	1154	200 - 415	10906		H0305: 3		
HCWFL78	529218	1155	3 - 170	10907	Lys-1 to Ala-9.	H0305: 6		
HCWFL86	523359	1156	125 - 295	10908	His-25 to Cys-33	H0305: 6		
HCWFL94	575522	1157	75 - 230	10909		H0305: 3, L0740: 2 and L0596: 1.		
HCWFM01	916803	1158	106 - 231	10910		H0305: 1 and H0589: 1.		
HCWFM11	959457	1159	26 - 379	10911		H0305: 2		
HCWFM16	678627	1160	80 - 379	10912	Asp-18 to Thr-25.	H0305: 2 and L0750: 1.	22q13.31	250100, 250800, 250800
HCWFM26	677348	1161	2 - 313	10913	Tyr-27 to Leu-33.	H0305: 3		
HCWFM43	715387	1162	3 - 101	10914	Pro-17 to Ile-23.	H0305: 2		
HCWFM59	757660	1163	85 - 219	10915		H0305: 3		
HCWFM60	740470	1164	244 - 390	10916		H0305: 2		
HCWFM65	849957	1165	93 - 233	10917	Ala-1 to Lys-7.	H0305: 6 and H0589: 1.		
HCWFM77	706488	1166	1 - 165	10918		H0305: 1, H0589: 1 and S0426: 1.		
HCWFN14	680404	1167	70 - 288	10919	Gly-50 to Lys-62.	H0305: 3		
HCWFN22	674750	1168	3 - 155	10920	Val-9 to Ser-14.	H0305: 3 and H0589: 1.		
HCWFN37	576547	1169	96 - 206	10921		H0305: 2		
HCWFO01	916814	1170	135 - 371	10922		H0305: 3 and H0589: 1.		
HCWFO02	920416	1171	2 - 175	10923	Asn-53 to Arg-58.	H0305: 2		
HCWFO20	577709	1172	93 - 269	10924		H0305: 3		
HCWFO24	664581	1173	45 - 272	10925		H0305: 3 and H0589: 1.		
HCWFO30	692814	1174	70 - 231	10926	Gly-34 to His-45.	H0305: 2		
HCWFO40	913855	1175	102 - 419	10927	Lys-37 to Trp-46, Arg-68 to Trp-73.	H0305: 3		
HCWFO51	725756	1176	2 - 85	10928	Lys-8 to Met-20.	H0305: 1 and H0589: 1.		
HCWFP21	531288	1177	195 - 437	10929	Gly-23 to Gly-30, Lys-32 to Leu-42.	H0305: 6		
HCWFP27	927700	1178	2 - 232	10930		H0305: 7		
HCWFP47	849893	1179	1 - 411	10931	Ser-47 to Ser-78.	AR089: 2, AR061: 0 H0305: 3		
HCWFP71	933211	1180	169 - 354	10932		H0305: 5 and H0589: 1.		

HCWFP81	576363	1181	124 - 318	10933	Lys-4 to Met-12, Ser-17 to Ser-24, Arg-37 to Lys-43.	H0305: 2
HCWFR11	967266	1182	2 - 121	10934		H0305: 2
HCWFR83	721373	1183	100 - 258	10935	Thr-12 to Thr-20.	H0305: 1 and H0589: 1.
HCWFS22	971566	1184	68 - 379	10936	Arg-19 to Arg-28, Pro-41 to Ser-47.	H0305: 3 and L0794: 1.
HCWFS65	572953	1185	3 - 245	10937	His-1 to Gln-8, Arg-10 to Glu-15, Arg-21 to Ala-27, Ala-67 to Asp-72.	H0305: 3
HCWFT29	690751	1186	48 - 236	10938	Ser-18 to Thr-23, Gly-35 to Glu-45.	H0305: 2
HCWFT33	959471	1187	118 - 2	10939	Ser-12 to Thr-21.	H0305: 7
HCWFT44	935855	1188	1 - 318	10940	Leu-9 to Asp-14.	H0305: 6
HCWFT77	739571	1189	15 - 218	10941		H0305: 2
HCWFT84	542236	1190	199 - 408	10942	Ser-21 to Ser-32.	H0305: 6
HCWFU03	921944	1191	143 - 319	10943	Thr-24 to Ser-30, Lys-54 to Lys-59.	H0305: 2, L0542: 1, L0779: 1, L0758: 1 and L0600: 1.
HCWFU07	861902	1192	1 - 84	10944	Ser-18 to Ser-27.	H0305: 2
HCWFU19	577315	1193	1 - 333	10945		H0305: 2
HCWFU32	716340	1194	79 - 258	10946	Lys-49 to Thr-60.	H0305: 3 and H0589: 2.
HCWFU64	577888	1195	3 - 206	10947		H0305: 3, L0368: 1 and L0779: 1.
HCWFU66	853005	1196	3 - 311	10948		AR061: 1, AR089: 1 H0305: 1 and H0589: 1.
HCWFU76	576839	1197	177 - 293	10949	Gly-14 to Ala-19, Leu-22 to Tyr-39.	H0305: 2
HCWFU83	574864	1198	95 - 310	10950	Asp-1 to Pro-12, Pro-25 to Ala-35.	H0305: 4 and H0402: 1.
HCWFV16	849953	1199	158 - 367	10951	Ser-34 to Gly-44, Pro-55 to Arg-62.	H0305: 2 and H0589: 1.
HCWFV21	849905	1200	136 - 312	10952	Ser-47 to Lys-54.	H0305: 4
HCWFV25	733993	1201	3 - 233	10953	Leu-48 to Arg-54.	H0305: 5, H0589: 3, L0748: 3, H0402: 1, L0518: 1, L0809: 1 and H0445: 1.

HCWFV32	960099	1202	64 - 153	10954	Arg-1 to Glu-9, Ala-21 to Pro-30.	H0305: 3		
HCWFV34	577896	1203	2 - 301	10955		H0305: 2 and H0589: 1.		
HCWFV37	575715	1204	3 - 167	10956	Val-8 to Arg-15, Ile-36 to Glu-42.	H0305: 3 and H0589: 1.		
HCWFV50	723666	1205	39 - 446	10957	Gly-1 to Pro-7.	H0305: 3 and H0589: 1.		
HCWFV69	527087	1206	80 - 208	10958	Asn-22 to Ser-28.	H0305: 4 and H0589: 2.		
HCWFW51	671807	1207	211 - 507	10959	Lys-4 to Gln-10, Ala-30 to Glu-36.	H0305: 2, H0063: 1 and L0635: 1.		
HCWFX23	675902	1208	3 - 191	10960		H0305: 2		
HCWFX30	825920	1209	199 - 336	10961	Ile-13 to Asn-18.	H0305: 2		
HCWFX44	703028	1210	34 - 450	10962	Thr-27 to Leu-43.	H0305: 2 and L0748: 1.		
HCWFZ30	692719	1211	97 - 252	10963		H0305: 2 and H0589: 1.		
HCWFZ56	733414	1212	92 - 307	10964	Ser-9 to Tyr-18.	H0305: 1 and S0053: 1.		
HCWGA27	861968	1213	200 - 337	10965		H0305: 3 and H0589: 1.	14q32	123270, 245200, 251600, 270100, 276900
HCWGA32	699272	1214	94 - 285	10966	Ser-16 to Asp-28, Ser-48 to Ser-53.	H0305: 2		
HCWGB61	733105	1215	3 - 230	10967	Phe-1 to His-7, Pro-52 to Ser-57.	H0305: 1 and H0589: 1.		
HCWGB64	578734	1216	56 - 166	10968	Ile-12 to Ser-18.	H0305: 3		
HCWGB78	861843	1217	111 - 392	10969	Cys-23 to Phe-33.	AR089: 2, AR061: 1		
HCWGC02	917348	1218	75 - 257	10970	Lys-7 to Ser-12.	H0305: 2 and H0589: 1.		
HCWGC50	772358	1219	147 - 392	10971	His-36 to Tyr-45, Thr-52 to Pro-64, Pro-66 to Glu-74.	H0305: 3		
HCWGD20	906973	1220	191 - 379	10972	Ser-1 to Asp-11, Leu-13 to Gly-25.	H0305: 3		
HCWGD33	849909	1221	57 - 209	10973		H0305: 2		
HCWGD66	496411	1222	49 - 189	10974		H0305: 2		
HCWGE12	967067	1223	211 - 300	10975		AR061: 1, AR089: 0 H0305: 3		
HCWGE22	727967	1224	72 - 239	10976		H0305: 2		

Clone	No.	ID	Range	No.	Description	H0305 / H0589	Location	Ref.
HCWGE23	853004	1225	229 - 441	10977		H0305: 4 and H0589: 1.		
HCWGE25	657236	1226	3 - 377	10978	Glu-22 to Glu-28, Leu-107 to Met-116.	H0305: 4 and H0589: 2.		
HCWGE39	705403	1227	2 - 61	10979	Ala-1 to Thr-6.	H0305: 2, L0666: 1 and L0749: 1.		
HCWGE47	925105	1228	231 - 359	10980		H0305: 2 and H0589: 2.		
HCWGE53	728249	1229	3 - 188	10981	His-1 to Trp-14.	H0305: 2		
HCWGE65	720349	1230	173 - 361	10982	Lys-41 to Pro-47.	H0305: 4		
HCWGE73	757333	1231	3 - 212	10983		H0305: 2		
HCWGE78	527557	1232	199 - 339	10984	Gln-2 to Gly-12.	H0305: 2		
HCWGE92	792722	1233	32 - 286	10985	Arg-9 to Ser-15, Thr-40 to Lys-47, Gly-58 to Asn-71, Gly-75 to Glu-85.	H0305: 2	15q22	102578, 109700, 151670, 154550, 601780
HCWGF06	935492	1234	28 - 282	10986	Arg-35 to Asn-47.	H0305: 4		
HCWGF71	960089	1235	208 - 402	10987	Gly-10 to Glu-34.	H0305: 5 and H0589: 1.		
HCWGF74	529235	1236	3 - 245	10988	Pro-1 to Arg-14, Leu-34 to Arg-40.	H0305: 2		
HCWGF75	682351	1237	173 - 313	10989	Glu-27 to Gln-32.	H0305: 2 and H0589: 1.		
HCWGF76	752789	1238	3 - 296	10990	Ser-26 to Arg-36, Leu-41 to Lys-49, Asn-54 to Lys-72.	H0305: 1 and H0589: 1.		
HCWGF91	754244	1239	43 - 153	10991		H0305: 2		
HCWGF92	861865	1240	94 - 306	10992	Lys-1 to Lys-7, Ser-20 to Ser-27.	H0305: 4 and H0445: 1.		
HCWGQ07	849889	1241	152 - 376	10993	Ser-53 to Ser-58.	H0305: 1 and H0589: 1.		
HCWGQ39	849891	1242	407 - 538	10994	Asp-1 to Phe-9, Phe-13 to Ile-18.	H0305: 3 and H0589: 3.		
HCWGQ62	916454	1243	18 - 362	10995	Lys-9 to Cys-17.	H0305: 3 and H0589: 1.		
HCWGQ71	710828	1244	1 - 306	10996	Gly-1 to Gly-11.	H0305: 1 and H0589: 1.		
HCWGQ80	529242	1245	92 - 259	10997	Lys-8 to Thr-16.	H0305: 3 and H0589: 2.		
HCWGQ84	853106	1246	192 - 401	10998	Pro-36 to Arg-43.	H0305: 2		
HCWGR34	923577	1247	52 - 132	10999	Pro-22 to Ser-27.	H0305: 1 and H0589: 1.		
HCWGR43	734888	1248	183 - 314	11000		H0305: 3 and L0529: 1.		
HCWGR47	719518	1249	59 - 196	11001	Met-3 to Ser-13,	H0305: 2		

HCWGR48	690954	1250	83 - 181	11002	Asn-20 to Glu-36.	H0305: 2
HCWGR69	849946	1251	28 - 366	11003	Gly-7 to Trp-13.	H0305: 3 and H0589: 2.
HCWGR76	778293	1252	98 - 268	11004		H0305: 1 and H0264: 1.
HCWGR88	736056	1253	21 - 182	11005		H0305: 3
HCWGT45	913730	1254	378 - 551	11006	Ala-1 to Gln-14, His-35 to Asp-45.	L0748: 2, H0402: 1, H0305: 1, H0589: 1, L0040: 1 and L0519: 1.
HCWGT49	527085	1255	19 - 207	11007		H0305: 3
HCWGT66	531374	1256	45 - 311	11008	Arg-27 to Cys-32, Val-61 to Gly-66.	H0305: 3 and H0589: 1.
HCWGU11	967064	1257	87 - 233	11009	Ala-8 to Cys-13, Asn-35 to Asp-49.	H0305: 2, L0761: 1 and L0779: 1.
HCWGU49	674752	1258	61 - 240	11010	Gln-3 to Lys-11.	H0305: 4, H0589: 1, L0764: 1 and L0527: 1.
HCWGU57	705637	1259	31 - 129	11011	Glu-15 to Arg-22, Glu-27 to Arg-32.	H0305: 2
HCWGU86	666943	1260	126 - 287	11012	Asp-1 to Trp-15, Ser-23 to Phe-28.	H0305: 3
HCWGW10	935865	1261	88 - 396	11013	Thr-48 to Gln-55.	H0305: 4 and H0589: 3.
HCWGW12	964088	1262	262 - 387	11014	Ala-1 to Leu-7.	H0305: 4 and H0589: 1.
HCWGW13	849911	1263	95 - 409	11015	Pro-58 to Leu-63.	H0305: 3
HCWGW32	615553	1264	2 - 253	11016	Lys-31 to Asp-37.	H0305: 2 and S0053: 1.
HCWGW63	745091	1265	1 - 69	11017	Ile-2 to Glu-9.	H0305: 2
HCWGW80	742103	1266	1 - 165	11018	Leu-42 to Lys-47.	H0305: 2 and L0750: 1.
HCWGW85	556369	1267	2 - 193	11019		H0305: 7 and H0589: 1.
HCWGW86	785506	1268	13 - 162	11020	Leu-7 to Gly-12, Glu-35 to Ser-46.	H0305: 2
HCWGW95	958780	1269	2 - 292	11021	Pro-41 to Ala-49, Ser-58 to Ile-64, Ser-85 to Trp-91, Leu-105 to Lys-119.	H0305: 1 and H0589: 1.
HCWGX05	902512	1270	733 - 1089	11022		AR050: 57, AR054: 55, AR051: 47
	972300	9551	1691 - 2062	19303	Pro-18 to Gln-23, Phe-25 to Ser-34, Asn-58 to Asn-67,	H0305: 4, H0589: 1, H0063: 1 and H0521: 1.

HCWGX23	720486	1271	2 - 235	11023	Gln-74 to Glu-79, Arg-99 to Arg-114, Gly-118 to Phe-124.	H0305: 2
HCWGX41	849887	1272	2 - 184	11024	Ala-1 to Ala-16.	H0305: 3
HCWGX58	920693	1273	2 - 241	11025	Lys-29 to Gly-35. Thr-40 to Leu-48, Val-75 to Gln-80.	H0305: 6, S0114: 1, L0142: 1, L0520: 1 and L0599: 1.
HCWGX68	733413	1274	40 - 129	11026		H0305: 2 and H0589: 1.
HCWGX82	924102	1275	109 - 237	11027		H0305: 5 and H0589: 2.
HCWGX94	793197	1276	32 - 184	11028		H0305: 2
HCWGY02	920113	1277	2 - 361	11029		H0305: 4
HCWGY03	924208	1278	260 - 87	11030	Lys-1 to Ala-12.	H0305: 5
HCWGY12	970693	1279	1 - 258	11031		H0305: 3
HCWGY20	669717	1280	155 - 310	11032		H0305: 2
HCWGY33	702441	1281	1 - 213	11033	Gly-1 to Pro-10, Asn-46 to Pro-55.	H0305: 3 and S0052: 1.
HCWGY43	660568	1282	138 - 242	11034		H0305: 2 and L0753: 1.
HCWGY64	670896	1283	2 - 208	11035	Lys-11 to Arg-17, Ser-32 to Lys-37, Thr-48 to Gln-58.	H0305: 2
HCWGY67	861886	1284	1 - 312	11036	Leu-14 to Leu-23.	H0305: 2
HCWGY76	496402	1285	145 - 291	11037	Tyr-43 to His-49.	H0305: 2
HCWGY85	917132	1286	2 - 352	11038	Ser-30 to Arg-43.	H0305: 2
HCWGY86	711312	1287	276 - 473	11039		H0305: 2
HCWGY90	960159	1288	3 - 203	11040		AR089: 12, AR061: 3 H0305: 5
HCWHA03	924189	1289	1 - 150	11041	Asp-12 to Gln-20.	H0305: 1 and H0589: 1.
HCWHA09	968224	1290	2 - 148	11042	Cys-16 to His-25, Thr-33 to Lys-40.	H0305: 3
HCWHA10	961278	1291	178 - 390	11043	Leu-13 to Glu-26, Arg-53 to Glu-58.	H0305: 3
HCWHA55	731770	1292	52 - 156	11044	Leu-22 to Leu-29.	H0305: 3
HCWHA56	733424	1293	63 - 173	11045		H0305: 1, H0589: 1, L0766: 1, L0779: 1 and L0604: 1.
HCWHA84	733421	1294	41 - 301	11046	Pro-27 to Lys-35,	H0305: 3

HCWHB12	970688	1295	2 - 286	11047	His-49 to Asp-56, Lys-64 to Glu-71.	H0305: 6		
HCWHB32	966508	1296	58 - 297	11048	Glu-7 to Asp-13, Glu-17 to Arg-25.	H0589: 2 and H0305: 1.		
HCWHB65	711437	1297	1 - 87	11049		H0305: 2		
HCWHB68	573571	1298	119 - 331	11050		H0305: 4 and H0589: 1.		
HCWHC01	849886	1299	67 - 231	11051		H0305: 2		
HCWHC26	950719	1300	61 - 252	11052	Ala-12 to Gly-18, Ser-37 to Gly-48.	H0305: 2		
HCWHC35	706508	1301	222 - 362	11053	Thr-22 to Glu-28.	H0305: 2		
HCWHC37	706509	1302	1 - 312	11054		H0305: 2		
HCWHC50	591202	1303	358 - 543	11055		H0305: 1 and H0589: 1.		
HCWHC59	964852	1304	69 - 161	11056		H0305: 5		
HCWHD07	953384	1305	2 - 337	11057	Lys-7 to Glu-18, Pro-38 to Thr-51.	H0305: 2 and H0589: 1.		
HCWHD17	663865	1306	2 - 172	11058	Lys-10 to Trp-15.	H0305: 3		
HCWHD23	934917	1307	129 - 227	11059		H0589: 2 and H0305: 1.		
HCWHD68	690359	1308	111 - 335	11060		H0305: 3 and H0589: 1.		
HCWHF62	582472	1309	1 - 207	11061	Pro-33 to Arg-43.	L0748: 3, H0305: 2 and H0589: 1.		
HCWHF85	746745	1310	123 - 317	11062		H0305: 2		
HCWHJ15	968379	1311	1 - 105	11063		H0305: 4		
HCWHJ25	686712	1312	172 - 354	11064		H0305: 2		
HCWHJ48	721816	1313	1 - 354	11065	Gly-1 to Thr-8, Pro-19 to Arg-25.	H0305: 2		
HCWHJ53	693313	1314	135 - 425	11066	Phe-11 to Trp-16, Gly-30 to Lys-38, Ser-49 to Ala-57.	H0305: 2 and H0589: 2.		
HCWHJ55	861884	1315	145 - 318	11067	Ser-43 to Leu-58.	H0305: 4		
HCWHJ75	786019	1316	167 - 412	11068	Gly-32 to Gly-39, Trp-54 to Lys-65.	H0305: 2		
HCWHJ91	674157	1317	103 - 345	11069	Gln-28 to Thr-36, Ala-59 to Arg-64.	H0305: 1 and H0589: 1.		
HCWHL11	967057	1318	3 - 299	11070	Ala-1 to Val-13.	H0305: 3		

HCWHL36	465250	1319	309 - 491	11071	Arg-25 to Lys-31.	H0305: 2, L0766: 1 and L0747: 1.
HCWHL42	959894	1320	30 - 233	11072		H0306: 2 and H0305: 2.
HCWHL73	960097	1321	3 - 407	11073	Pro-10 to Cys-15, Gly-22 to Gln-27, Lys-54 to Arg-64, Glu-73 to Gly-81, Asp-89 to Ala-96, Trp-98 to Ser-104.	H0305: 6 and L0589: 1.
HCWHL89	754087	1322	2 - 139	11074		H0305: 2
HCWHN05	849885	1323	210 - 377	11075		H0305: 2, S0114: 1, H0402: 1 and H0444: 1.
HCWHN28	529654	1324	70 - 330	11076		H0305: 2
HCWHO38	573533	1325	169 - 426	11077	Pro-25 to Gly-36.	H0305: 3
HCWHO45	717807	1326	34 - 288	11078	Gly-1 to Lys-13, Arg-47 to Ser-52, Gln-75 to Phe-85.	H0305: 1, H0589: 1 and S0428: 1.
HCWHO78	960180	1327	77 - 208	11079	Ser-14 to Trp-26, Phe-39 to Tyr-44.	H0305: 3
HCWHO93	924109	1328	2 - 169	11080		H0305: 3 and H0589: 1.
HCWHP06	935483	1329	93 - 302	11081		H0305: 3 and H0402: 2.
HCWHP25	881285	1330	19 - 474	11082	Ser-25 to Ala-31.	H0305: 6, L0748: 2 and L0528: 1.
HCWHP40	577691	1331	228 - 395	11083		H0305: 5 and H0589: 1.
HCWHP44	705392	1332	1 - 96	11084		H0305: 4 and L0749: 1.
HCWHP70	711476	1333	163 - 303	11085	Pro-13 to Leu-22.	S0114: 1 and H0305: 1.
HCWHP74	598510	1334	41 - 322	11086	Glu-1 to Glu-7, Phe-12 to Val-17, Gly-42 to Ser-49, Thr-52 to Thr-65.	H0305: 1 and H0589: 1.
HCWHP84	849900	1335	3 - 164	11087		H0305: 2
HCWHQ03	924187	1336	1 - 144	11088	Gly-1 to Ser-7, Gly-23 to Asn-28.	H0305: 4
HCWHQ31	574945	1337	129 - 428	11089		AR089: 1, AR061: 1 H0305: 4
HCWHQ82	677186	1338	292 - 429	11090		H0305: 2 and L0740: 1.

HCWHR01	916526	1339	2 - 403	11091	Ser-16 to Ser-29, Leu-42 to Glu-50, Pro-76 to Gln-85.	H0305: 5
HCWHR09	542336	1340	245 - 388	11092		H0305: 6 and H0589: 1.
HCWHR59	739293	1341	195 - 572	11093		H0305: 2 and H0589: 1.
HCWHR77	729850	1342	3 - 341	11094	Arg-1 to Thr-10, Pro-13 to Gly-25.	H0305: 3
HCWHR81	935419	1343	71 - 277	11095	Val-1 to Glu-8, Thr-18 to Ser-23, Glu-47 to Pro-52.	AR089: 3, AR061: 1 H0305: 6
HCWHS13	657230	1344	103 - 204	11096	Arg-26 to Pro-33.	H0305: 2
HCWHS28	675051	1345	38 - 223	11097	Ser-34 to Gly-49.	H0305: 2
HCWHS77	861875	1346	89 - 349	11098		H0305: 1 and H0589: 1.
HCWHT50	527542	1347	75 - 305	11099	His-47 to Phe-53, Pro-59 to Ala-64.	H0305: 6
HCWHT56	849979	1348	42 - 230	11100	Gln-24 to Val-31.	H0305: 3
HCWHT59	924105	1349	106 - 333	11101		H0305: 3
HCWHU22	849878	1350	63 - 329	11102		H0305: 3
HCWHU30	974485	1351	75 - 404	11103	Ser-7 to Arg-14, Ser-16 to Ala-26, Pro-53 to Tyr-60.	H0305: 3
HCWHU47	720340	1352	130 - 255	11104		H0305: 2
HCWHU52	726054	1353	39 - 176	11105		H0305: 3
HCWHU54	727314	1354	1 - 123	11106		H0305: 2
HCWHU58	736052	1355	3 - 302	11107	Ser-3 to Ser-8, Glu-10 to Gln-17, Asp-24 to Asn-36, Pro-55 to Arg-69.	H0305: 2
HCWHV11	964996	1356	1 - 213	11108		H0305: 2
HCWHV18	466511	1357	145 - 342	11109		H0305: 3
HCWHV28	686710	1358	253 - 444	11110	Pro-14 to Gln-20.	H0305: 1, H0589: 1 and L0748: 1.
HCWHV33	702437	1359	3 - 200	11111		H0305: 1 and H0589: 1.
HCWHV41	960157	1360	175 - 345	11112	Gln-25 to Gln-33, Thr-41 to Arg-47.	H0305: 3 and H0589: 1.
HCWHV61	849983	1361	9 - 422	11113	Trp-1 to Arg-13.	H0305: 4

HCWHV64	770049	1362	2 - 148	Asp-9 to Ala-14.	H0305: 2 and L0745: 1.
HCWHV66	923527	1363	252 - 479	Pro-3 to Tyr-8.	H0305: 1 and H0589: 1.
HCWHV71	917274	1364	269 - 502	Gln-12 to Tyr-18, Lys-59 to Glu-68.	H0305: 3
HCWHV94	953379	1365	169 - 345	Ser-5 to Ser-12.	H0305: 5
HCWHW32	861905	1366	236 - 559		H0305: 3 and H0589: 1.
HCWHW38	722213	1367	2 - 232	Arg-53 to Gly-59.	AR051: 12, AR050: 1 H0305: 3
	861870	9552	210 - 551	Ala-1 to Gln-7, Lys-24 to Cys-34, Arg-90 to Gly-96.	
HCWHW83	841937	1368	26 - 220	Trp-33 to Ser-38.	H0305: 5 and H0589: 1.
HCWHX08	959456	1369	3 - 209	Arg-45 to Pro-50.	H0305: 1, H0589: 1 and L0369: 1.
HCWHX09	625596	1370	37 - 303	Gly-1 to Cys-7, Tyr-28 to Ser-43.	H0589: 2 and H0305: 1.
HCWHX72	849884	1371	2 - 247	Ala-1 to Gly-7, Gly-12 to Gly-19, Pro-21 to Lys-31.	H0305: 3 and L0599: 1.
HCWHX91	723178	1372	27 - 245	Ala-45 to Arg-61.	H0305: 2
HCWHX95	736004	1373	4 - 117	Gly-4 to Gln-14, Cys-33 to Lys-38.	H0305: 2
HCWHZ18	666452	1374	54 - 209	Arg-11 to Phe-16.	H0305: 2, L0805: 1 and L0776: 1.
HCWHZ51	725682	1375	124 - 315	Ser-1 to Ile-7, Thr-26 to Ser-32, Pro-42 to Trp-48.	H0305: 2
HCWHZ59	739294	1376	2 - 322		H0305: 2
HCWHZ83	781186	1377	3 - 92		H0305: 2
HCWHZ89	668670	1378	3 - 104		H0305: 2
HCWKA13	494088	1379	580 - 374		H0305: 5
	971148	9553	89 - 247		
HCWKA21	670897	1380	129 - 266	Gly-30 to Gln-36, Thr-38 to Pro-46.	H0305: 2
HCWKA28	466763	1381	99 - 272		H0305: 2
HCWKA79	574911	1382	307 - 483	Glu-1 to Gln-8.	H0305: 3

Clone				Range	Region	Codes
HCWKA96	963621	1383	11135	203 - 355	Thr-14 to Val-20, Lys-37 to Asn-48.	H0305: 3, H0589: 1 and L0758: 1.
HCWKB04	676904	1384	11136	74 - 244	Pro-50 to Ile-55.	L0776: 4, H0305: 2, H0589: 1, L0659: 1, L0438: 1 and L0756: 1.
HCWKB10	964570	1385	11137	202 - 408	Pro-14 to Ser-30.	H0305: 3 and H0589: 2.
HCWKC83	496385	1386	11138	1 - 99		H0305: 3
HCWKD34	706520	1387	11139	231 - 368		H0305: 1 and H0589: 1.
HCWKF08	959388	1388	11140	' 1 - 216		H0305: 1 and H0589: 1.
HCWKF28	686655	1389	11141	155 - 340	Pro-15 to Gly-21, Pro-23 to Cys-28, Leu-40 to Asn-48.	H0305: 2
HCWKF29	779862	1390	11142	55 - 207		H0305: 2
HCWKG10	964577	1391	11143	3 - 134		H0305: 1 and H0589: 1.
HCWKH08	959381	1392	11144	71 - 310	Arg-1 to Asp-9.	H0305: 1 and H0589: 1.
HCWKH16	661898	1393	11145	290 - 382	Asn-1 to Trp-7.	H0305: 1 and H0589: 1.
HCWKH25	678086	1394	11146	146 - 307		H0305: 2
HCWKH36	924191	1395	11147	102 - 206		H0305: 3
HCWKI31	678375	1396	11148	1 - 75		H0305: 2
HCWKI77	920043	1397	11149	347 - 457		H0305: 2 and H0589: 2.
HCWKI92	792689	1398	11150	154 - 480		H0305: 4
HCWKJ23	934393	1399	11151	323 - 478		H0305: 2 and H0589: 2.
HCWKJ40	861851	1400	11152	233 - 409	Leu-5 to Glu-12, Ser-34 to Lys-40.	H0305: 2
HCWKJ60	968112	1401	11153	102 - 365	Gly-7 to Ile-13.	H0305: 6
HCWKJ96	571302	1402	11154	88 - 249	Cys-16 to Cys-22, Lys-32 to Arg-42.	H0305: 6
HCWKM28	849915	1403	11155	1 - 357		H0305: 4
HCWKM31	697974	1404	11156	2 - 169	Ala-6 to Pro-12.	H0305: 2
HCWKM58	849934	1405	11157	10 - 246		H0305: 4 and H0589: 1.
HCWKM60	740347	1406	11158	12 - 143		H0305: 2 and S0052: 1.
HCWKM88	792086	1407	11159	20 - 148	Met-5 to Asn-12.	H0305: 1 and H0589: 1.
HCWKM90	960177	1408	11160	152 - 310	Leu-9 to Cys-18.	H0305: 5
HCWKN08	959380	1409	11161	24 - 284	Pro-27 to Asn-34, Asn-48 to Leu-57.	H0305: 2

HCWKN57	861537	1410	310 - 2	11162	Ser-13 to Pro-36, Thr-79 to Ser-89.	H0305: 3	
HCWKO51	959684	1411	330 - 494	11163	Thr-17 to Thr-27.	H0305: 2 and L0599: 1.	
HCWKO82	827083	1412	2 - 217	11164	Cys-49 to Ala-54.	H0305: 6	
HCWKP03	924104	1413	95 - 331	11165	Glu-9 to Pro-15, Gln-17 to Asp-24, Gly-46 to Lys-67.	H0305: 4	
HCWKP51	725653	1414	1 - 270	11166	Pro-15 to Arg-20.	H0305: 2	
HCWKP53	664923	1415	202 - 309	11167		H0305: 2	
HCWKP56	849861	1416	1 - 342	11168	Glu-1 to Ser-11, Ser-75 to Leu-81, Ser-86 to Thr-91.	H0305: 3 and H0589: 1.	
HCWKP63	732447	1417	79 - 246	11169	Lys-1 to Leu-27, Ser-29 to Lys-44, Arg-50 to His-55.	H0305: 2 and H0589: 1.	
HCWKQ31	849851	1418	108 - 326	11170	Glu-68 to Arg-73.	H0305: 2	
HCWKQ55	706487	1419	116 - 214	11171		H0305: 2 and H0589: 1.	
HCWKR13	917268	1420	323 - 153	11172		H0305: 5	
HCWKR80	527074	1421	30 - 398	11173		H0305: 4 and H0589: 1.	
HCWKS13	657194	1422	26 - 232	11174	Glu-1 to Cys-6.	H0305: 2, L0803: 1 and L0779: 1.	
HCWKT11	966989	1423	44 - 193	11175	Gly-36 to Thr-47.	H0305: 2	
HCWKT43	659539	1424	2 - 244	11176		H0305: 2	
HCWKT57	881629	1425	19 - 267	11177		H0305: 2	
HCWKT63	849944	1426	301 - 429	11178		H0305: 4	
HCWKV68	959801	1427	1 - 243	11179		H0305: 2	
HCWKV77	527554	1428	265 - 402	11180	Ser-9 to Gln-15.	H0305: 2	
HCWKV85	932540	1429	2 - 202	11181	Asp-8 to Cys-15.	H0305: 3	
HCWKX13	466512	1430	173 - 337	11182		S0114: 1 and H0305: 1.	
HCWKX61	676895	1431	18 - 164	11183	Phe-42 to Gly-47.	H0305: 4 and H0589: 2.	
HCWKX68	725014	1432	57 - 203	11184	Pro-33 to Thr-39.	H0305: 2	
HCWKX77	772163	1433	143 - 418	11185		H0589: 2 and H0305: 1.	
HCWKX81	724873	1434	132 - 368	11186		H0305: 3	
HCWLA68	665744	1435	3 - 161	11187	Val-12 to Cys-18, Arg-23 to Gly-29.	H0305: 1 and H0589: 1.	

HCWLD01	916439	1436	2 - 367	11188		L0655: 2, H0305: 1, H0581: 1, T0041: 1 and L0767: 1.
HCWLD06	935392	1437	2 - 331	11189		H0305: 3 and H0589: 1.
HCWLD30	933118	1438	264 - 133	11190	Leu-13 to Thr-27.	H0305: 1 and H0022: 1.
HCWLD83	728219	1439	58 - 318	11191	Val-2 to His-11.	H0305: 2
HCWLE11	880982	1440	57 - 413	11192	Glu-38 to Gly-46, Phe-79 to Phe-88, Ser-104 to Gly-112.	H0305: 6, H0402: 1 and L0659: 1.
HCWLE34	576816	1441	218 - 385	11193		H0305: 2
HCWLE37	960093	1442	20 - 412	11194	Ala-12 to Cys-23, Trp-30 to Gly-38, Pro-41 to Gly-48, Pro-51 to Gly-62, Gly-95 to Ser-105.	H0305: 2
HCWLE46	719247	1443	76 - 528	11195	Ser-3 to His-8, Tyr-11 to Gly-28.	H0305: 4
HCWLE57	764189	1444	33 - 227	11196	Glu-43 to Ser-52.	H0305: 2 and H0589: 1.
HCWLE64	745863	1445	121 - 312	11197	Pro-10 to Arg-17, Gln-40 to Gly-50.	H0305: 2 and H0589: 1.
HCWLE95	684331	1446	21 - 188	11198		H0305: 2
HCWLH02	853014	1447	332 - 553	11199	Asp-1 to Pro-9, Ser-35 to Gln-43, His-63 to Gln-68.	H0305: 1 and H0589: 1.
	919329	9554	279 - 64	19306	Gly-10 to Arg-17.	
HCWLH09	625558	1448	300 - 530	11200		H0305: 2
HCWLH20	529356	1449	1 - 282	11201		H0305: 3
HCWLH42	954875	1450	671 - 435	11202		H0305: 4
HCWLH75	670202	1451	99 - 245	11203	Val-28 to Ala-34.	H0305: 4
HCWLH78	935908	1452	148 - 366	11204		H0305: 4
HCWLH79	959458	1453	226 - 447	11205	Pro-14 to His-22, Pro-31 to Gln-39.	H0305: 6
HCWLH80	577886	1454	10 - 270	11206	Asn-2 to Thr-8, Ser-23 to Gly-35.	H0305: 4
HCWSB09	923573	1455	99 - 239	11207	Gly-24 to Lys-33.	H0305: 1 and H0589: 1.
HCWSB30	771897	1456	285 - 500	11208		H0305: 2 and H0589: 1.
HCWSB65	728360	1457	36 - 182	11209	Gln-9 to Trp-18.	H0305: 2

HCWTA02	919258	1458	65 - 223		H0589: 2
HCWTA59	531422	1459	18 - 146	Glu-32 to Gln-38.	H0305: 3 and H0589: 1.
HCWTB01	861850	1460	188 - 358		S0116: 1, H0305: 1 and H0589: 1.
HCWTB08	920509	1461	60 - 203		H0305: 1 and H0589: 1.
HCWTB11	965024	1462	3 - 299	His-7 to Ala-14, Arg-42 to Arg-51, Glu-56 to Asp-61.	H0305: 2 and H0589: 2.
HCWTB13	861029	1463	168 - 296	Glu-6 to Arg-15.	H0305: 4, H0589: 1 and H0179: 1.
HCWTB14	657621	1464	2 - 328		H0305: 2 and H0589: 1.
HCWTB25	677748	1465	3 - 236	Gln-11 to Tyr-23, Arg-37 to Phe-44, Arg-66 to Arg-78.	H0589: 2
HCWTB31	697615	1466	14 - 436		H0305: 1 and H0589: 1.
HCWTB33	702129	1467	138 - 350		H0305: 1 and H0589: 1.
HCWTB36	529499	1468	1 - 210		H0305: 2 and H0589: 1.
HCWTB38	732440	1469	1 - 309	Pro-1 to Asp-6, Asp-24 to Pro-30.	H0589: 2 and H0305: 1.
HCWTB56	853009	1470	2 - 346		AR061: 5, AR089: 4 H0305: 2 and H0589: 1.
HCWTB65	861848	1471	2 - 175	Thr-1 to Asp-8, Arg-28 to Leu-34.	H0305: 1 and H0589: 1.
HCWTB77	771887	1472	317 - 448		H0589: 2
HCWTB83	730832	1473	23 - 283	Asp-5 to Thr-20.	H0305: 2 and H0589: 1.
HCWTF05	849954	1474	1 - 318	Trp-5 to Trp-17, Gly-30 to Lys-36.	H0305: 2 and H0589: 1.
HCWTF11	966513	1475	346 - 621		H0589: 2, S0114: 1 and H0305: 1.
HCWTF19	668358	1476	3 - 149	Met-32 to Lys-39.	H0589: 2 and H0305: 1.
HCWTF72	760898	1477	189 - 362	Asn-16 to Arg-26, Arg-37 to Gly-46.	H0589: 2 and H0305: 1.
HCWTG01	915863	1478	2 - 175	Thr-21 to Val-26, Lys-28 to Lys-36.	H0305: 3 and H0305: 2.
HCWTG15	659860	1479	105 - 248	Ser-21 to Thr-27.	H0589: 2
HCWTG26	681271	1480	348 - 476		H0305: 1 and H0589: 1.

HCWTG30	954579	1481	84 - 197	Leu-1 to Leu-7.	H0589: 4 and H0305: 3.
HCWTG44	657911	1482	366 - 572		H0589: 3
HCWTG45	662482	1483	217 - 384	Lys-34 to Leu-39.	H0589: 3
HCWTG60	740078	1484	167 - 379	Tyr-8 to Ser-14.	H0305: 1 and H0589: 1.
HCWTG66	754823	1485	79 - 249	Tyr-19 to Val-24.	H0589: 2
HCWTG77	924107	1486	185 - 304	Asn-16 to Gly-25.	H0589: 5 and H0305: 4.
HCWTG81	773341	1487	104 - 334	Pro-61 to His-67.	H0589: 2
HCWTI25	669935	1488	118 - 345	Gln-56 to Arg-63, Ala-65 to Leu-74.	H0589: 2 and H0305: 1.
HCWTI33	701757	1489	192 - 323	Ser-27 to Phe-34.	H0305: 1 and H0589: 1.
HCWTI38	576883	1490	60 - 293	Ser-4 to Glu-15.	H0305: 2 and H0589: 1.
HCWTI44	689971	1491	82 - 225	Thr-16 to Asn-21, Tyr-32 to Arg-37.	H0589: 2
HCWTI47	720023	1492	163 - 279		H0589: 2
HCWTI54	723080	1493	108 - 188		H0305: 1 and H0589: 1.
HCWTJ01	915878	1494	1 - 336		H0305: 1 and H0589: 1.
HCWTJ50	724072	1495	42 - 257	Ala-17 to Ser-32.	H0589: 2
HCWTL24	676906	1496	221 - 325	Ser-1 to Lys-18, Ser-40 to Arg-51.	H0305: 1 and H0589: 1.
HCWTL25	598511	1497	165 - 329		H0305: 1 and H0589: 1.
HCWTL51	725482	1498	64 - 267	Trp-4 to Gly-10, His-42 to Cys-50, Ser-53 to Gly-63.	H0589: 2
HCWTL52	573539	1499	36 - 293	Glu-18 to Leu-27, Gly-35 to Gln-40, Pro-46 to Thr-51, Arg-67 to Ser-76.	H0305: 2 and H0589: 1.
HCWTL58	697623	1500	111 - 278	Ile-1 to Arg-7, Leu-46 to Gln-51.	H0589: 2
HCWTL69	960597	1501	188 - 454	Pro-18 to Ser-25, Leu-42 to Arg-53.	H0589: 2
HCWTL78	760707	1502	160 - 231	Asn-18 to Lys-23.	H0305: 1 and H0589: 1.
HCWTL85	836155	1503	1 - 153		H0589: 2
HCWTM16	661569	1504	2 - 391	Thr-1 to Thr-11, Asp-59 to Gln-64,	H0305: 1, H0589: 1, H0581: 1 and L0565: 1.

HCWTO06	934912	1505	16 - 360	11257	Thr-90 to Thr-101. Cys-20 to His-27, Thr-34 to Ser-63, Arg-72 to Gly-78, Leu-89 to Met-99.	H0589: 2	
HCWTO29	660457	1506	2 - 277	11258	Leu-16 to Leu-24.	H0305: 1 and H0589: 1.	
HCWTO35	706525	1507	159 - 302	11259	Leu-1 to Ser-6, Ser-10 to Leu-17, Pro-43 to Arg-48.	H0589: 2	
HCWTO52	726444	1508	54 - 233	11260		H0305: 1, H0589: 1, L0667: 1 and L0752: 1.	
HCWTO60	681257	1509	2 - 205	11261		H0589: 2	
HCWTP13	656678	1510	78 - 311	11262	Arg-58 to Ser-67.	H0589: 2	
HCWTP22	674158	1511	182 - 370	11263		H0305: 1 and H0589: 1.	
HCWTP76	731438	1512	110 - 328	11264		H0589: 2	
HCWTP77	529346	1513	23 - 343	11265		H0305: 2 and H0589: 1.	
HCWTP90	788663	1514	205 - 393	11266	Ser-8 to Arg-13, Lys-19 to Ser-29.	H0589: 2	
HCWTP91	661551	1515	179 - 394	11267		H0589: 2, L0438: 2 and H0265: 1.	7q31	126650, 126650, 164860, 180105, 222800, 246900, 274600, 274600, 602081
HCWTR08	958791	1516	3 - 191	11268		H0305: 5 and H0589: 2.	
HCWTR54	729290	1517	49 - 240	11269	Ser-37 to Gly-44.	AR089: 6, AR061: 2 H0589: 2	
HCWTR77	659506	1518	1 - 198	11270		H0589: 4 and H0305: 1.	
HCWTS15	654317	1519	2 - 223	11271	Leu-1 to His-8.	AR061: 5, AR089: 1 H0305: 1 and H0589: 1.	
HCWTS84	669926	1520	98 - 292	11272		H0305: 1 and H0589: 1.	
HCWTT20	669430	1521	335 - 436	11273		H0589: 2	
HCWTT45	576720	1522	148 - 315	11274	Leu-10 to Tyr-16, Glu-24 to Ala-31.	H0305: 2 and H0589: 2.	
HCWTT47	706527	1523	188 - 355	11275		H0589: 2	
HCWTT63	542409	1524	1 - 210	11276	Lys-7 to Leu-15, Gly-31 to Arg-36,	H0305: 5 and H0589: 2.	

Clone	Acc	SEQ	Range	ID	Region	Notes
HCWTT81	712302	1525	110 - 247	11277	Glu-60 to Asp-67.	H0305: 1 and H0589: 1.
HCWTT89	786693	1526	224 - 331	11278	Glu-1 to Lys-9, His-18 to Gly-23, Glu-31 to Lys-36.	H0305: 1 and H0589: 1.
HCWTU12	934902	1527	102 - 308	11279		H0305: 2 and H0589: 2.
HCWTU83	780917	1528	13 - 183	11280	Arg-8 to Met-13, Glu-35 to Lys-52.	H0589: 2
HCWTU84	666642	1529	30 - 167	11281	Ser-1 to Ser-6.	H0305: 2 and H0589: 1.
HCWTV17	725862	1530	232 - 429	11282		H0305: 1 and H0589: 1.
HCWTV62	742696	1531	135 - 401	11283		AR051: 9, AR054: 8, AR050: 8 H0305: 3 and H0589: 1.
HCWTV73	574912	1532	187 - 474	11284	Ser-48 to Pro-55, Ala-62 to Asp-72, Lys-84 to Ile-90.	H0305: 2 and H0589: 1.
HCWTV88	861846	1533	2 - 322	11285	Gly-38 to Leu-43, Pro-56 to Ile-61, Gln-64 to Pro-73, Thr-86 to Arg-93.	H0305: 1 and H0589: 1.
HCWUA19	668355	1534	167 - 406	11286	Met-41 to Gly-55.	H0589: 2 and H0305: 1.
HCWUA23	577964	1535	52 - 276	11287	Ala-18 to Gly-28, Trp-45 to Pro-51.	H0589: 2 and H0305: 1.
HCWUA43	715000	1536	3 - 164	11288	Gly-16 to Ala-22.	H0589: 2
HCWUA90	706532	1537	4 - 156	11289	Pro-33 to Asn-40.	H0589: 2
HCWUB03	923556	1538	38 - 304	11290		H0305: 1 and H0589: 1.
HCWUB08	958770	1539	5 - 130	11291	Val-9 to Gly-21.	H0589: 2
HCWUB74	765274	1540	131 - 358	11292		H0305: 2 and H0589: 1.
HCWUB83	853008	1541	44 - 280	11293	Pro-37 to Lys-48, Lys-57 to Ser-62.	H0305: 3, H0254: 1, H0589: 1, H0445: 1 and H0543: 1.
HCWUC39	572977	1542	1 - 312	11294	Gly-29 to Ile-37.	H0305: 3 and H0589: 1.
HCWUC64	588122	1543	156 - 314	11295	Gly-27 to Lys-33.	H0589: 1 and H0542: 1.
HCWUC94	721663	1544	3 - 500	11296	Gln-12 to Pro-29, Gly-35 to Gln-50, Leu-55 to Thr-61, Asn-70 to Cys-89,	H0305: 1 and H0589: 1.

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HCWUD64	746332	197 - 361	11297	Pro-91 to Gln-96.	H0305: 1 and H0589: 1.		
HCWUD83	827340	215 - 442	11298	Leu-26 to Ser-31.	H0305: 1 and H0589: 1.		
HCWUD85	529221	1 - 126	11299	Phe-8 to Lys-15.	H0305: 2 and H0589: 1.		
HCWUD93	574856	3 - 314	11300	Ser-6 to Gly-24, Ser-38 to Asn-43, Pro-53 to Gly-58, Gly-60 to Gln-68, Gly-79 to Glu-85, Leu-93 to Lys-101.	H0305: 2 and H0589: 1.		
HCWUF05	849929	47 - 226	11301	Tyr-11 to Thr-20, Tyr-27 to Ala-40.	H0305: 1 and H0589: 1.		
HCWUF30	691734	112 - 405	11302	Leu-9 to Ser-15, Asn-41 to Asn-50, Gln-57 to Glu-62, Arg-82 to Arg-97.	H0305: 1 and H0589: 1.		
HCWUF40	703804	25 - 168	11303		H0589: 2		
HCWUF46	656680	2 - 211	11304	Pro-4 to Glu-12, Ser-61 to Trp-70.	H0589: 2		
HCWUF54	933212	54 - 167	11305	Thr-12 to Asp-19.	H0305: 1 and H0589: 1.		
HCWUF84	686711	88 - 174	11306		H0305: 1 and H0589: 1.		
HCWUG43	697616	16 - 261	11307	Glu-28 to Ser-36.	H0589: 2		
HCWUG59	573548	167 - 409	11308	Ala-31 to Cys-36.	H0305: 2, H0589: 1 and H0581: 1.	1q12-1q21.2	104770, 107670, 110700, 145001, 146760, 146790, 159001, 191315, 600897, 601412, 601652, 601863, 602491
HCWUG93	920882	1 - 243	11309	Thr-43 to Glu-50, Ala-52 to Trp-57, Gly-63 to Asn-71.	H0305: 1 and H0589: 1.		
HCWUH17	662478	87 - 293	11310	Pro-18 to Tyr-23, Ala-57 to Leu-65.	H0305: 5, H0589: 3, L0748: 3, H0402: 1, L0518: 1, L0809: 1 and H0445: 1.		
HCWUH25	677747	130 - 333	11311		H0305: 1 and H0589: 1.		

HCWUH85	752790	1560	181 - 282	11312		H0589: 2
HCWUI10	964028	1561	2 - 166	11313	Lys-15 to Tyr-28, Gln-47 to Leu-52.	H0589: 2
HCWUI17	662483	1562	7 - 147	11314	Arg-8 to Leu-13, Gly-16 to Trp-28, Lys-41 to Lys-46.	H0589: 2
HCWUK13	656679	1563	197 - 391	11315	Ala-39 to Phe-47.	H0305: 1 and H0589: 1.
HCWUK56	733122	1564	166 - 330	11316		H0589: 2
HCWUK77	771883	1565	26 - 238	11317		H0305: 1 and H0589: 1.
HCWUK95	615550	1566	2 - 97	11318		H0305: 2 and H0589: 1.
HCWUL03	923572	1567	81 - 230	11319	Ala-10 to Lys-16, Arg-35 to Ser-42.	H0589: 2
HCWUL19	668361	1568	69 - 314	11320	Ile-12 to Asp-18.	H0305: 1 and H0589: 1.
HCWUL24	968380	1569	80 - 196	11321		H0305: 1 and H0589: 1.
HCWUL32	523358	1570	58 - 315	11322	Arg-6 to Ala-13.	H0305: 5 and H0589: 1.
HCWUL36	849901	1571	1 - 357	11323	Gln-27 to Gln-32, Lys-37 to Gly-45.	H0305: 2 and H0589: 1.
HCWUL47	720024	1572	3 - 482	11324	Thr-18 to Pro-23, Pro-91 to Gly-96.	H0305: 1 and H0589: 1.
HCWUL69	740373	1573	144 - 257	11325	Asn-9 to Ser-20.	S0114: 1 and H0589: 1.
HCWUL74	690750	1574	20 - 307	11326	Lys-17 to Gln-23, Glu-77 to Phe-82.	H0305: 1 and H0589: 1.
HCWUL83	527566	1575	359 - 556	11327	Pro-50 to Asp-57.	H0305: 2 and H0589: 1.
HCWUN05	928191	1576	27 - 221	11328	Ala-12 to His-20, His-22 to Met-29.	H0402: 1, H0305: 1 and H0589: 1.
HCWUO10	861840	1577	320 - 493	11329	Arg-7 to Ser-19.	H0589: 2
HCWUO81	756978	1578	134 - 436	11330	Ser-15 to Arg-20, His-27 to Lys-44, Gly-55 to Ser-61, Pro-69 to Gln-74.	H0589: 2
HCWUP64	746328	1579	89 - 226	11331	Asn-17 to Phe-25, Ser-41 to Arg-46.	H0305: 1, H0589: 1 and H0543: 1.
HCWUQ02	968431	1580	283 - 489	11332	Pro-13 to Pro-19.	H0305: 3 and H0589: 1.
HCWUQ77	719064	1581	2 - 118	11333		H0305: 1, H0589: 1 and S0052: 1.
HCWUR43	714529	1582	28 - 312	11334	Pro-8 to Cys-21,	H0589: 2 and H0305: 1.

HCWUR83	958776	1583	392 - 258	Ser-56 to Ile-63, Asp-77 to His-85.	H0589: 2 and L0769: 1.
HCWUR95	711186	1584	12 - 326	Thr-8 to Lys-15, Gly-17 to Lys-26, Thr-84 to Asp-90.	H0305: 1 and H0589: 1.
HCWUS02	919224	1585	37 - 132	Gln-13 to Ser-25.	H0589: 1 and H0318: 1.
HCWUS29	690351	1586	50 - 211	Ser-1 to Cys-14.	H0589: 1, S0426: 1 and L0362: 1.
HCWUS63	542330	1587	2 - 457	Pro-6 to Asn-16, Pro-21 to Tyr-31, Pro-49 to Gln-55, Asp-61 to Gly-66, Gln-78 to Cys-87.	H0305: 2, H0589: 2 and H0635: 1.
HCWUS72	855815	1588	52 - 330	Arg-5 to Ala-12, Ser-15 to Val-20, Pro-35 to Ala-44, Thr-70 to Lys-79.	H0589: 1 and S0002: 1.
HCWUT24	676902	1589	242 - 400	Asn-4 to Gln-9.	H0589: 2
HCWUT46	861836	1590	3 - 239	Thr-9 to Lys-18.	H0305: 4, H0589: 1 and L0601: 1.
HCWUU04	614859	1591	179 - 361		H0305: 2 and H0589: 1.
HCWUU07	861959	1592	166 - 510		H0305: 1 and H0589: 1.
HCWUU16	661570	1593	3 - 203	Ala-58 to Leu-63.	H0305: 1 and H0589: 1.
HCWUU58	735736	1594	3 - 107		S0218: 1 and H0589: 1.
HCWUV78	574908	1595	202 - 447	Asp-26 to Asn-32.	H0305: 2 and H0589: 1.
HCWUV17	662485	1596	150 - 353	Leu-27 to Thr-33.	H0305: 4 and H0589: 1.
HCWUV24	676909	1597	3 - 167	Lys-1 to Arg-13, Leu-36 to Pro-41.	H0589: 2
HCWUV28	686171	1598	2 - 193	Gln-59 to Gly-64.	H0589: 1 and S0052: 1.
HCWUV65	676334	1599	1 - 192	His-15 to Ser-30, Pro-38 to Ser-43, Arg-46 to Asp-52.	H0305: 1 and H0589: 1.
HCWUV76	615554	1600	97 - 225	Glu-3 to Gln-14.	H0305: 1 and H0589: 1.
HCWUW01	915860	1601	367 - 507		H0589: 2
HCWUW04	614844	1602	3 - 281	Arg-42 to Gly-48,	H0305: 4 and H0589: 2.

HCWUW55	964086	1603	3 - 143	Gln-57 to Ser-64.	H0589: 2
HCWUW58	694016	1604	1 - 279	Lys-1 to Trp-8, Met-22 to Gly-29, Ile-40 to His-46.	H0305: 1 and H0589: 1.
HCWUW69	882383	1605	230 - 391		H0305: 1 and H0589: 1.
HCWUW76	769808	1606	2 - 514		H0305: 1 and H0589: 1.
HCWUW84	782840	1607	92 - 238	Gly-20 to Val-25, Pro-32 to Asp-41.	S0114: 1 and H0589: 1.
HCWUW90	712303	1608	31 - 183	Ile-1 to His-6.	H0305: 2 and H0589: 1.
HCWUW95	706528	1609	4 - 204	Met-21 to Gln-27, Arg-38 to Phe-44.	H0589: 2
HCWUX02	852993	1610	272 - 466	Cys-3 to Thr-9.	H0589: 2
HCWUX25	614857	1611	269 - 418	Trp-9 to Cys-14.	H0589: 2
HCWUX78	773336	1612	35 - 214		H0402: 1, H0589: 1, L0748: 1 and L0749: 1.
HCWUY16	661550	1613	266 - 541	Arg-18 to Lys-24.	H0305: 1 and H0589: 1.
HCWUY19	922920	1614	482 - 913	Ala-2 to Gly-12.	L0748: 4, H0305: 2 and H0589: 1.
HCWUY26	681249	1615	66 - 158		H0305: 1 and H0589: 1.
HCWUY41	711771	1616	3 - 149	Lys-1 to Lys-7.	H0589: 2
HCWUY69	615630	1617	487 - 32		H0305: 1 and H0589: 1.
HCWVA18	849894	1618	1 - 312	Ser-19 to Ala-27.	H0305: 3, H0589: 1 and L0769: 1.
HCWVA25	754314	1619	10 - 159		H0589: 2
HCWVA44	716347	1620	1 - 135		H0305: 1 and H0589: 1.
HCWVF94	793533	1621	190 - 303		H0305: 1, H0589: 1 and L0748: 1.
HCWWH59	770274	1622	139 - 450	Thr-1 to Arg-14, Gln-29 to Ile-37, Thr-43 to Cys-48.	H0305: 1 and H0589: 1.
HCWWH65	747324	1623	22 - 162	Arg-6 to Ser-11.	H0589: 2 and H0305: 1.
HCWWH67	772342	1624	158 - 340	Pro-20 to Leu-33, Pro-43 to Ser-48.	H0305: 2 and H0589: 1.
HCWWH69	861830	1625	2 - 319	Phe-14 to Pro-21.	H0589: 3

HDCAC05	975255	1626	2 - 178	11378	Pro-6 to Ser-20, Cys-23 to Thr-33, Glu-43 to Gly-49.	H0637: 3		
HDCAD10	963330	1627	141 - 440	11379	Pro-19 to Arg-27, Thr-58 to Trp-72.	H0637: 2		
HDCAG86	852970	1628	2 - 190	11380		H0637: 2		
HDCAP64	922818	1629	173 - 313	11381	Ser-8 to Val-14, His-34 to Phe-41.	H0637: 2		
HDCAV79	881404	1630	1 - 432	11382		H0637: 1 and S0052: 1.		
HDCAY54	959750	1631	1 - 366	11383		H0637: 1 and S0052: 1.		
HDCBO38	961931	1632	56 - 226	11384	Gln-33 to Thr-40.	H0637: 2		
HDDMA83	926991	1633	2 - 571	11385	Glu-1 to Gly-13, Tyr-35 to Arg-42, Glu-95 to His-103, Leu-113 to Gly-119, Ala-139 to Glu-144.	H0641: 1 and H0521: 1.		
HDDNY79	933804	1634	3 - 455	11386	Asn-77 to Ser-82, Pro-112 to Ile-118.	H0637: 1 and H0641: 1.		
HDDOC53	934157	1635	742 - 509	11387	Tyr-16 to Gly-22, Pro-40 to Gln-45, Pro-70 to Gly-78.	S0002: 2, L0770: 2, L0769: 2, L0766: 2, L0518: 2, L0783: 2, H0521: 2, L0777: 2, L0731: 2, H0556: 1, H0650: 1, H0657: 1, H0486: 1, L0055: 1, H0641: 1, S0426: 1, L0662: 1, L0775: 1, L0655: 1, L0665: 1, S0053: 1, H0659: 1, L0754: 1, L0779: 1, L0759: 1 and H0422: 1.		
HDLAC80	799887	1636	109 - 315	11388	Gly-44 to Gly-53, Leu-56 to Lys-61.	H0485: 2		
HDLAD61	775541	1637	1 - 372	11389	Thr-2 to Arg-14.	H0485: 2	15q22.3	151670, 600374, 601780
HDLAH25	796174	1638	118 - 336	11390		H0485: 2 and H0580: 1.		
HDLAK03	923285	1639	2 - 214	11391		H0485: 2		
HDLAN36	923478	1640	1 - 99	11392		H0485: 2		

HDLAQ27	787084	1641	66 - 188	11393	Lys-1 to Lys-10, Thr-22 to Glu-28, Arg-35 to Lys-41.	H0485: 1 and H0090: 1.
HDLAQ50	723854	1642	2 - 88	11394	Pro-1 to Thr-6.	H0485: 2 and L0803: 1.
HDLAR24	943930	1643	78 - 230	11395		H0543: 2 and H0485: 1.
HDLAV29	922276	1644	220 - 393	11396	Lys-1 to Lys-13.	S0116: 1, H0485: 1 and H0421: 1.
HDLBB03	923286	1645	3 - 134	11397	Phe-10 to Arg-21.	H0485: 1 and H0090: 1.
HDMAQ15	941282	1646	1147 - 152	11398		AR089: 55, AR061: 26, S0142: 2, H0657: 1, H0638: 1, S0278: 1, S0144: 1, S0344: 1, L0777: 1 and L0599: 1.
HDMBH76	883212	1647	307 - 723	11399	Asp-14 to Gly-24, Gly-31 to Val-36, Gln-58 to Pro-69, Lys-83 to Gly-90, Leu-97 to Thr-103.	H0521: 2, H0638: 1 and L0365: 1.
HDMBK12	968954	1648	40 - 246	11400		S0114: 1 and H0638: 1.
HDPAA89	693445	1649	115 - 303	11401	Ser-12 to Gly-18, Ser-25 to Ser-30.	L0748: 3, H0354: 1, S0344: 1 and H0521: 1.
HDPAB03	924124	1650	76 - 369	11402	Leu-5 to Thr-10, Arg-12 to Glu-19, Pro-41 to Cys-47, Pro-58 to Leu-70.	H0521: 2
HDPAD22	674560	1651	2 - 205	11403	Arg-1 to Arg-6, Arg-17 to Pro-24.	H0416: 1, L0761: 1, L0766: 1 and H0521: 1.
HDPAE86	709072	1652	59 - 328	11404	Tyr-41 to Gly-50.	L0748: 2, H0521: 1 and H0543: 1.
HDPAF70	881626	1653	1 - 465	11405	Glu-37 to Gly-42, Gly-130 to Trp-136, Ser-138 to Gln-145.	H0521: 2
HDPAG03	771636	1654	55 - 228	11406	Asp-1 to Ile-7, Arg-22 to Ile-32.	H0521: 5 and H0522: 1.
HDPAG32	947832	1655	119 - 607	11407	Ser-14 to Met-19, Thr-125 to Arg-133.	AR089: 25, AR061: 8, H0521: 2, H0581: 1 and H0423: 1.

Clone						
HDPAH10	969041	1656	530 - 144	11408	Pro-30 to Pro-37, Gln-43 to Lys-48, Lys-56 to Asp-74, Gln-76 to Gln-82, Thr-93 to Ala-101, Met-107 to Trp-117.	L0775: 3, L0748: 3, H0521: 2, L0749: 2, H0486: 1, H0069: 1, H0271: 1, H0560: 1, S0426: 1, L0655: 1, S0216: 1, H0423: 1 and H0422: 1.
HDPAQ24	677179	1657	2 - 439	11409	Pro-5 to Pro-20, Thr-58 to Leu-63, Ala-71 to Arg-79, Ala-99 to Arg-105.	S0052: 1 and H0521: 1.
HDPAS40	860041	1658	261 - 581	11410		S0053: 1 and H0521: 1.
HDPAV74	916457	1659	1 - 330	11411	Asp-1 to Ala-6, Phe-34 to Asp-42, Ala-61 to Asp-67.	H0521: 8
HDPAZ46	719024	1660	252 - 446	11412	Pro-12 to Gly-19, Ser-33 to Ala-38.	H0521: 2
HDPAZ73	756742	1661	308 - 460	11413		H0486: 1 and H0521: 1.
HDPBC24	760623	1662	1 - 228	11414		H0521: 2
HDPBD79	973367	1663	1 - 135	11415	Arg-35 to Lys-45.	H0341: 1 and H0521: 1.
HDPBJ94	945460	1664	360 - 710	11416	Thr-22 to Tyr-35, Ala-84 to Ser-91.	AR061: 2, AR089: 2 S0116: 1, L0768: 1, L0656: 1, H0521: 1, L0070: 1, L0439: 1 and L0779: 1.
	972094	9555	783 - 502	19307		
HDPBM64	773091	1665	182 - 352	11417	Phe-15 to Ile-22.	H0341: 1, H0521: 1 and L0595: 1.
HDPBO71	888109	1666	3 - 203	11418		AR051: 35, AR054: 16, AR050: 13 H0641: 1 and H0521: 1.
HDPBS54	904762	1667	1145 - 1351	11419	Thr-28 to Pro-36, Ala-43 to Thr-49.	H0521: 9, L0595: 2, H0522: 1, L0593: 1 and L0594: 1.
	909915	9556	177 - 341	19308		
HDPBW10	964553	1668	1 - 231	11420	Arg-61 to Phe-68.	H0521: 2 and H0522: 1.
HDPBW26	670345	1669	3 - 137	11421	Val-23 to Pro-45.	H0581: 1 and H0521: 1.
HDPBX82	779848	1670	301 - 453	11422		H0521: 2 and L0803: 1.
HDPBY23	858345	1671	27 - 272	11423	Glu-74 to His-82.	L0509: 2, L0005: 1, H0179:

Clone		SEQ ID	Range	SEQ ID	Features	Codes	Chromosome	OMIM
						1, H0521: 1, L0749: 1 and H0542: 1.		
HDPCC48	709005	1672	56 - 304	11424	Asp-1 to Leu-12, Leu-21 to Gly-28, Trp-35 to Gly-43, Arg-52 to Gly-61.	H0583: 1 and H0521: 1.		
HDPCH65	950716	1673	249 - 371	11425		L0766: 1, H0521: 1 and H0444: 1.		
HDPCK27	683383	1674	151 - 462	11426	Ala-9 to Ala-15, Ser-21 to Arg-35, Thr-60 to Pro-65.	H0521: 3		
HDPCK66	766231	1675	192 - 392	11427	Ser-20 to Trp-30.	H0264: 1 and H0521: 1.		
HDPCM35	973352	1676	1 - 468	11428	Ser-32 to Thr-40, Pro-43 to Trp-48.	H0521: 2		
HDPCN22	927838	1677	2 - 622	11429	Glu-1 to Leu-7, Ser-31 to Glu-54, Lys-67 to Val-73, Lys-88 to Ser-103, Lys-110 to Phe-115, Val-122 to Glu-137, Gly-139 to Lys-154, Glu-167 to Asp-173, Gln-175 to Met-183.	H0264: 1, H0521: 1 and L0748: 1.		
HDPCN94	794275	1678	3 - 767	11430		AR089: 5, AR061: 2 H0521: 2	6q25	180020, 600320, 600883
HDPCR34	852871	1679	339 - 190	11431	Pro-1 to Val-12.	H0521: 2 and H0179: 1.		
HDPCS43	714479	1680	3 - 311	11432		H0179: 1 and H0521: 1.		
HDPCV60	720278	1681	282 - 512	11433		L0754: 6, L0747: 4, H0521: 3, L0748: 2, S0002: 1 and L0749: 1.		
HDPCW90	612234	1682	8 - 439	11434	Ser-70 to Ala-80.	H0542: 3, H0090: 2, H0522: 2, H0556: 1, H0141: 1, S0002: 1 and H0521: 1.		
HDPCY03	924057	1683	24 - 356	11435	His-21 to Arg-28, Pro-64 to Thr-70, Pro-99 to Ala-104.	H0521: 2		

HDPCY43	958157	1684	228 - 383	His-1 to Gln-16, Tyr-27 to Lys-32.	H0370: 1 and H0521: 1.
HDPCY93	571375	1685	83 - 394		S0134: 2, S0114: 1, H0521: 1 and L0740: 1.
HDPDI78	773556	1686	2 - 346		H0521: 2
HDPDJ24	677166	1687	173 - 361	Gln-1 to Glu-10, Asp-15 to Ala-24.	H0521: 2 and L0748: 1.
HDPDJ90	735027	1688	227 - 454	Ser-6 to Cys-21, Ser-30 to Ser-44.	H0264: 1 and H0521: 1.
HDPDL62	691647	1689	239 - 415	Asp-1 to Arg-7.	H0521: 2, H0580: 1 and L0518: 1.
HDPDL79	774943	1690	269 - 583	Lys-7 to Ser-12, Pro-24 to Thr-30.	H0521: 2
HDPDN08	959332	1691	283 - 939	Ile-30 to Pro-35, Thr-68 to Asn-77, Pro-87 to Gln-93, Gly-142 to Leu-149.	H0521: 1 and H0542: 1.
HDPDO46	719010	1692	166 - 417	Pro-11 to Arg-18.	H0521: 1 and H0522: 1.
HDPFC15	745045	1693	15 - 209	Ser-2 to Arg-12.	H0521: 2
HDPFF07	974494	1694	178 - 513	Ala-1 to Gln-21, Gly-27 to Gly-32, Gln-34 to Gly-42, Ala-55 to Ala-63, Asp-74 to Gly-81, Glu-98 to Gly-105.	H0521: 4
HDPFJ21	852824	1695	3 - 140	Ser-1 to Ser-14.	H0318: 1 and H0521: 1.
HDPFQ93	772456	1696	2 - 343	Glu-1 to Gln-9, Leu-30 to Gln-35, Thr-76 to Gln-81, Gly-85 to Glu-91.	H0271: 1 and H0521: 1.
HDPFV55	575202	1697	472 - 230	Ser-1 to Ser-14.	H0075: 1, L0766: 1, H0521: 1 and L0748: 1.
HDPFW80	734937	1698	224 - 508	Met-14 to Leu-28, Pro-30 to Leu-38, Ser-62 to Ala-67.	S0053: 1 and H0521: 1.
HDPFY90	788870	1699	3 - 173		H0521: 2

HDPFZ58	735975	1700	1 - 234	11452	Pro-7 to Trp-14, Gly-53 to Glu-60, Met-71 to Lys-78.	H0583: 1, H0521: 1 and H0543: 1.		
HDPGB73	574603	1701	129 - 257	11453	Asp-1 to Tyr-20.	H0581: 1, H0271: 1 and H0521: 1.		
HDPGG28	625678	1702	1 - 351	11454	Thr-37 to Arg-43, Ala-49 to Gly-54, Pro-59 to Gly-66, Glu-83 to Arg-89.	H0521: 3		
HDPGH27	937144	1703	196 - 312	11455		H0486: 1 and H0521: 1.	11p15	108985, 186921, 602092
HDPGI14	415961	1704	283 - 444	11456		H0521: 2		
HDPGI21	760926	1705	38 - 232	11457	Ala-17 to Arg-23.	H0521: 2		
HDPGJ95	919792	1706	243 - 455	11458		H0521: 2		
HDPGL65	666830	1707	186 - 67	11459		S0114: 1 and H0521: 1.		
HDPGM85	783563	1708	271 - 429	11460	Lys-37 to Trp-46.	H0521: 2		
HDPGO30	780359	1709	1 - 420	11461	Pro-4 to Ala-10, Ala-12 to Trp-22, Ser-24 to Lys-33, His-42 to Phe-49, Ile-56 to Gln-70, Glu-122 to Glu-140.	H0521: 2		
HDPGO52	852800	1710	3 - 188	11462	Glu-1 to Arg-10, Gly-12 to Glu-22, His-25 to Gln-33.	S0002: 1 and H0521: 1.		
HDPGP54	464312	1711	215 - 466	11463	Ala-1 to Gly-14.	H0341: 1 and H0521: 1.		
HDPGP75	872249	1712	219 - 422	11464	Gly-18 to Pro-26.	H0521: 2		
HDPGT43	495783	1713	515 - 219	11465		H0063: 1 and H0521: 1.		
	852795	9557	408 - 617	19309				
	852806	9558	250 - 369	19310				
HDPGU50	720595	1714	231 - 344	11466		H0521: 3 and S0053: 1.		
HDPGX44	683277	1715	260 - 406	11467	Thr-28 to Arg-39.	H0521: 1 and H0522: 1.		
HDPHB75	915912	1716	27 - 140	11468		H0521: 4, H0522: 1, H0542: 1 and H0543: 1.		
HDPHF59	677172	1717	97 - 225	11469	Ser-30 to Arg-38.	H0537: 1 and H0521: 1.		
HDPHG23	416041	1718	108 - 326	11470	Thr-1 to Asp-7.	H0521: 2		

HDPHG42	732133	1719	1 - 408		H0521: 2, H0583: 1, H0341: 1, L0142: 1, H0445: 1 and H0543: 1.
HDPHG89	733198	1720	410 - 601		H0521: 1 and H0444: 1.
HDPHH51	921093	1721	3 - 332	Arg-1 to Leu-6, Thr-30 to Asn-36, Arg-48 to Ile-53, Asn-65 to Ser-85, Glu-92 to Asn-109.	S0298: 1 and H0521: 1.
HDPHI02	919825	1722	275 - 460	Ser-1 to Asp-6.	H0305: 1 and H0521: 1.
HDPHI71	760325	1723	1 - 210	Ala-1 to Ser-10, Pro-22 to Ser-34, Gln-47 to Asn-55.	H0521: 1 and H0522: 1.
HDPHJ36	706624	1724	178 - 309	Ser-30 to Arg-36.	H0521: 2
HDPHK96	921957	1725	1 - 516	Pro-1 to His-6, Ser-13 to Cys-22, Lys-49 to Glu-54, Arg-60 to Trp-72, Arg-90 to Arg-99, Gln-117 to His-127.	H0402: 2, S0052: 2, S0428: 2, H0271: 1, H0521: 1 and H0445: 1.
HDPIA15	772020	1726	2 - 592	Gln-7 to Lys-13, Tyr-17 to Glu-26, Asp-97 to Ser-104, Asn-135 to Met-140.	H0521: 1 and H0522: 1.
HDPIC37	954869	1727	377 - 694	Lys-1 to Thr-14, Glu-28 to Val-34, Lys-56 to Ala-66, Glu-72 to Lys-79.	H0521: 2
HDPID10	928163	1728	2 - 559	Glu-16 to Gln-25, His-36 to His-45, His-48 to His-57, His-63 to Gln-70, Ala-76 to His-93, Gln-97 to Gly-107, Glu-121 to Gly-137.	H0521: 2
HDPID37	868169	1729	82 - 276	Pro-42 to Gln-65.	H0341: 3, H0656: 1, H0580:

Gene	ID1	ID2	Range	ID3	Amino acid region	Cassette	Cytogenetic	OMIM
						1, S0344: 1, S0002: 1 and H0521: 1.		
HDPIE42	713081	1730	199 - 399	11482	Arg-7 to Glu-19.	H0250: 1 and H0521: 1.		
HDPIF86	591540	1731	2 - 205	11483	Lys-1 to Gly-10, Arg-17 to Arg-33, Ala-39 to Pro-50.	H0521: 4, L0740: 1 and L0593: 1.	14q11.2	182600, 186880, 190195, 190195, 222700, 600243, 602279, 602279
HDPIH48	677664	1732	7 - 405	11484	Thr-16 to Arg-22, Gly-28 to Gly-36, Gln-43 to His-60.	H0580: 1, S0278: 1 and H0521: 1.		
HDPIP26	681519	1733	268 - 528	11485		H0580: 1, H0521: 1 and L0748: 1.		
HDPIQ55	961163	1734	72 - 278	11486	Pro-16 to Tyr-21, Ser-34 to Trp-40, Ser-57 to Thr-67.	L0748: 3, H0271: 2 and H0521: 1.	9q12	602014
HDPIQ65	747791	1735	287 - 424	11487		H0521: 2		
HDPIT53	926498	1736	33 - 383	11488	Pro-16 to Ser-21.	H0581: 1 and H0521: 1.		
HDPIT61	741724	1737	1 - 420	11489	Glu-1 to Arg-33, Gly-45 to Pro-52, Pro-62 to Ser-71, Pro-83 to Trp-95.	AR089: 1, AR061: 0 H0521: 1 and H0522: 1.		
HDPJA04	628745	1738	37 - 261	11490	Leu-1 to Trp-8, Ala-36 to Gly-41.	H0521: 2		
HDPJA26	767110	1739	3 - 428	11491	Gln-1 to Asp-7, Leu-41 to Glu-47, Lys-55 to Glu-62, Ser-113 to Trp-119.	H0521: 2		
HDPJB08	921453	1740	3 - 194	11492	Gln-1 to Tyr-7.	H0265: 1 and H0521: 1.		
HDPJI05	911170	1741	1 - 333	11493		AR050: 11, AR054: 1, AR051: 0 S0002: 2, H0185: 1, H0521: 1, H0576: 1 and L0779: 1.		
	928715	9559	1178 - 759	19311				
HDPJK06	852781	1742	282 - 452	11494		H0063: 1 and H0521: 1.		
HDPJK73	765446	1743	265 - 417	11495		H0521: 2		
HDPJN68	752907	1744.	198 - 317	11496	Lys-4 to Asn-9,	H0083: 1 and H0521: 1.		

HDPJO40	711003	1745	2 - 163	11497	Arg-30 to His-35.	H0589: 1 and H0521: 1.
HDPJP32	918630	1746	1 - 153	11498	Gly-14 to Ser-20, Lys-35 to Lys-47.	H0580: 1 and H0521: 1.
HDPJP79	538038	1747	264 - 473	11499	Gln-1 to Thr-6.	H0421: 1 and H0521: 1.
	774743	9560	281 - 111	19312	His-3 to Asp-11, Leu-13 to Thr-27, Ser-47 to Arg-54.	
HDPJR11	965011	1748	1 - 288	11500		H0521: 1 and H0522: 1.
HDPJU86	785391	1749	503 - 279	11501		L0439: 6, L0752: 4, L0794: 3, L0805: 2, L0776: 2, L0438: 2, L0756: 2, H0486: 1, L0435: 1, H0641: 1, L0803: 1, L0666: 1, H0521: 1 and L0755: 1.
HDPKD52	959653	1750	163 - 447	11502		S0114: 1, H0656: 1, S0002: 1, S0426: 1, S0052: 1, S0053: 1 and H0521: 1.
HDPKD82	778970	1751	10 - 177	11503	Ala-46 to His-51.	H0521: 1 and H0445: 1.
HDPKI40	710991	1752	1 - 369	11504	Pro-65 to Gly-75, Pro-80 to Gly-91, Lys-98 to Gly-111.	H0521: 1 and H0542: 1.
HDPKK25	677921	1753	1 - 126	11505	Cys-33 to Pro-42.	S0134: 1 and H0521: 1.
HDPLB25	965139	1754	19 - 183	11506	Gln-21 to Gln-39.	H0521: 2 and L0748: 2.
HDPLC45	909091	1755	235 - 828	11507		AR089: 1, AR061: 0 L0439: 3, L0438: 2, H0521: 2, L0773: 1, L0662: 1, L0766: 1, H0542: 1 and H0543: 1.
HDPLC60	740144	1756	88 - 396	11508	Gly-23 to Gly-37, Ala-39 to Arg-48.	H0521: 2
HDPLD11	966610	1757	77 - 331	11509	Ser-34 to Asp-41.	H0521: 2
HDPLD29	690409	1758	310 - 432	11510		H0521: 2
HDPLD57	734528	1759	203 - 394	11511		H0521: 2
HDPLD89	786704	1760	319 - 435	11512		H0521: 2
HDPLE38	706639	1761	185 - 328	11513	Gly-16 to Trp-21,	H0521: 2

							21q22.3	120220, 120240, 123580, 151385, 171860, 190685, 236100, 236200, 240300, 267750, 600065, 601072, 601145
HDPLE63	703477	1762	1 - 447	11514	Val-27 to Trp-32. Tyr-3 to Arg-10, Arg-21 to Lys-32, Gln-43 to Glu-51, Ile-72 to Thr-81, Lys-97 to Asp-102.	H0521: 2 and H0486: 1.		
HDPLE75	852685	1763	51 - 236	11515		H0521: 2		
HDPLE88	625293	1764	80 - 202	11516	Glu-18 to Thr-24.	H0521: 2		
HDPLE96	915966	1765	225 - 449	11517		H0521: 2		
HDPLF86	785316	1766	62 - 631	11518	Lys-26 to Ser-32, Met-110 to Glu-115.	H0521: 2 and L0591: 1.		
HDPLG10	964213	1767	376 - 203	11519	Phe-36 to Lys-48.	H0521: 2, H0402: 1 and L0741: 1.		
HDPLJ28	840111	1768	1 - 96	11520		H0521: 2		
HDPLK49	835603	1769	1 - 213	11521		H0521: 2		
HDPLN06	935010	1770	118 - 408	11522	Ile-1 to Ala-6, Gly-36 to Leu-41.	H0521: 2		
HDPLN76	921700	1771	249 - 404	11523		H0306: 1 and H0521: 1.		
HDPLO50	724098	1772	424 - 621	11524		T0041: 1 and H0521: 1.		
HDPLT29	958196	1773	1 - 216	11525	Pro-1 to Ala-12, Arg-19 to Gly-25.	H0305: 1, S0344: 1 and H0521: 1.		
HDPLV74	765334	1774	270 - 479	11526	Met-1 to Pro-11.	H0556: 1 and H0521: 1.		
HDPMA48	582015	1775	2 - 706	11527	Asp-1 to Lys-17, Ala-53 to Lys-61, Asp-66 to Arg-73.	AR089: 19, AR061: 15 H0581: 1, H0521: 1 and H0522: 1.		
HDPMC49	852767	1776	813 - 1061	11528		H0265: 1 and H0522: 1.		
HDPMF53	733466	1777	187 - 327	11529	Thr-18 to Ala-24, Ser-27 to Trp-32.	H0477: 1 and H0522: 1.		
HDPMH83	661316	1778	1 - 579	11530	Arg-19 to Asp-27, Ser-40 to His-45, Gln-77 to Leu-83.	H0581: 1 and H0522: 1.	21q22.3	120220, 120240, 123580, 151385, 171860, 190685, 236100, 236200, 240300, 267750, 600065, 601072, 601145
HDPMJ93	852763	1779	220 - 510	11531	Gln-11 to His-20,	H0264: 1 and H0522: 1.		

HDPMO62	912722	1 - 582	1780	Ser-85 to Ser-90. Ala-14 to Gly-20, Gly-34 to Pro-44, His-128 to Ser-134.	AR089: 1 S0002: 2 and H0522: 1.		
HDPMP25	678068	347 - 601	1781	Arg-1 to Pro-6, Gln-23 to Asn-35, Thr-49 to Lys-60.	S0116: 1 and H0522: 1.		
HDPMQ34	956248	228 - 374	1782	Thr-44 to Ile-49.	H0522: 2		
HDPMS42	713759	96 - 263	1783		L0005: 2, L0740: 2, L0157: 1, L0766: 1, L0809: 1, L0787: 1, S0052: 1, H0522: 1, L0741: 1 and L0749: 1.		
HDPMV53	697470	97 - 270	1784	Ser-50 to Asn-58.	S0212: 1, L0438: 1 and H0522: 1.		
HDPMW22	665153	124 - 366	1785		H0522: 2, H0581: 1, H0063: 1 and H0521: 1.		
HDPMZ01	916447	1 - 195	1786	Thr-19 to Arg-26.	L0777: 3 and H0522: 2.		
HDPNA03	924082	7 - 78	1787		H0522: 2		
HDPNC96	934520	3 - 734	1788	Val-2 to Gly-8, Asp-20 to Gln-26.	AR089: 1, AR061: 1 H0522: 2 and L0766: 1.		
HDPND35	973108	80 - 466	1789	Asn-1 to Asp-6, Ala-20 to Ala-27, Ser-34 to Ile-47, Pro-60 to Ser-65, Arg-82 to Trp-87.	H0521: 2 and H0522: 1.		
HDPNE60	974827	37 - 939	1790	Gly-2 to Lys-8.	H0556: 3 and H0522: 1.	5q32-q33	109690, 109690, 131400, 138491, 138491, 138491, 154500, 180071, 181460, 222600, 222600, 222600, 234000, 272750, 600807, 601411, 601596, 602089
HDPNI03	924081	111 - 413	1791	Ala-10 to Ala-23, Thr-49 to Trp-64,	L0471: 2 and H0522: 2.		

Clone	No.	SEQ ID	Range	Amino acid region	Homology	Location
						120950, 120960,
HDPNJ14	767447	1792	3 - 149	Gln-80 to Arg-87.	H0264: 1 and H0522: 1.	
HDPOC44	707241	1793	119 - 481	Thr-15 to Ala-22, Glu-43 to Ser-48.	H0486: 1, H0090: 1 and H0522: 1.	
HDPOD96	939770	1794	14 - 277	Asp-49 to Lys-58, Gln-71 to Ser-80, Ser-112 to Arg-117.	H0521: 2 and H0522: 1.	
HDPOF25	852745	1795	215 - 475	Arg-6 to Pro-14, Arg-22 to Glu-29, Leu-59 to Arg-64.	H0589: 2 and H0522: 1.	
HDPOI52	927699	1796	114 - 422	Lys-1 to Gln-7.	S0114: 1, H0179: 1, L0761: 1 and H0522: 1.	
HDPOJ93	792193	1797	140 - 343	Ala-73 to Ala-89.	H0179: 2 and H0522: 1.	
HDPOK47	973097	1798	153 - 311		H0087: 1 and H0522: 1.	
HDPOL60	767953	1799	2 - 148	Thr-3 to Leu-10, Pro-19 to Thr-29.	H0583: 1 and H0522: 1.	
HDPOL66	681391	1800	280 - 438	Gln-31 to Arg-38.	H0580: 1 and H0522: 1.	
HDPOX65	674963	1801	107 - 226		H0264: 1 and H0522: 1.	
HDPOY33	702285	1802	31 - 207	Asn-13 to Met-21, Asn-23 to Gln-37, Gly-53 to Ser-59.	S0002: 1 and H0522: 1.	
HDPOZ51	926977	1803	3 - 416	Gly-10 to Leu-17.	H0486: 1 and H0522: 1.	
HDPPA66	870840	1804	231 - 497		H0635: 1, S0002: 1, H0522: 1 and L0748: 1.	
HDPPC83	683656	1805	3 - 263		S0114: 1 and H0522: 1.	
HDPPD59	708334	1806	3 - 236		H0522: 1 and H0436: 1.	
HDPPG35	579315	1807	2 - 550	Gly-4 to Glu-12.	H0083: 1 and H0522: 1.	
HDPPG86	923846	1808	175 - 342		H0522: 2	
HDPPK33	666510	1809	259 - 453	Thr-15 to Gly-27.	L0748: 3, L0777: 2, H0421: 1, L0762: 1, L0805: 1, L0783: 1, L0788: 1, L0532: 1, H0521: 1, H0522: 1 and L0756: 1.	
HDPPL30	692095	1810	74 - 241	Arg-8 to His-27, Thr-38 to Thr-48.	S0002: 1 and H0522: 1.	
HDPPM09	625281	1811	2 - 529	Val-1 to Pro-10,	H0521: 2 and H0522: 1.	1p32

HDPPN33	958993	1812	3 - 95	Leu-12 to Arg-39, Cys-44 to Gly-57, Lys-94 to Gly-99, Glu-114 to Ser-134, Pro-145 to Phe-165.	H0522: 2	138140, 178300, 187040, 600101, 600650, 600650, 600722, 600722
HDPPN59	909867	1813	174 - 473	Lys-1 to Lys-8, Arg-16 to Lys-26.	AR061: 1, AR089: 0 H0522: 2 and L0758: 1.	
HDPPO88	963382	1814	334 - 555	Arg-9 to Ala-15, Tyr-37 to Lys-42, Glu-48 to Gly-54.	H0271: 1, S0426: 1 and H0522: 1.	
HDPPP24	812091	1815	1 - 474	Pro-59 to Asn-65.	H0580: 1 and H0522: 1.	
HDPPQ39	712993	1816	302 - 460	Pro-1 to Arg-17, Asn-60 to Phe-69.	S0114: 1, H0305: 1, H0522: 1 and H0423: 1.	
HDPPU30	671973	1817	2 - 310	Leu-14 to Gly-20.	H0179: 1 and H0522: 1.	
HDPPU44	951276	1818	176 - 376	Ser-40 to Arg-46, Thr-51 to Asp-60.	AR089: 3, AR061: 1 L0755: 4, H0521: 1 and H0522: 1.	
HDPPW36	785239	1819	156 - 308	Asn-1 to Phe-9, Pro-20 to Ser-31, Asn-40 to Lys-45.	H0583: 1, H0522: 1 and L0740: 1.	
HDPPX43	674958	1820	1 - 303	Ser-19 to Ser-25.	H0264: 1, H0521: 1 and H0522: 1.	
HDPQA91	973075	1821	131 - 331	Lys-1 to Gln-10, Asn-56 to Ser-67.	H0522: 2 and H0521: 1.	
HDPQC21	786516	1822	66 - 281		H0522: 3	
HDPQC83	830539	1823	125 - 295	Gly-28 to Asn-38.	H0522: 2 and H0421: 1.	
HDPQJ45	928430	1824	1 - 273	Ile-43 to Asp-51, Arg-53 to His-61, Pro-63 to Lys-69.	H0521: 1 and H0522: 1.	
HDPQL15	789876	1825	26 - 364		H0522: 2	
HDPQL64	746043	1826	131 - 301	Phe-1 to Trp-8, Thr-17 to Tyr-27.	H0264: 1 and H0522: 1.	

The SEQ ID NO. (11564–11578) column aligns with each clone row respectively: HDPPN33 = 11564, HDPPN59 = 11565, HDPPO88 = 11566, HDPPP24 = 11567, HDPPQ39 = 11568, HDPPU30 = 11569, HDPPU44 = 11570, HDPPW36 = 11571, HDPPX43 = 11572, HDPQA91 = 11573, HDPQC21 = 11574, HDPQC83 = 11575, HDPQJ45 = 11576, HDPQL15 = 11577, HDPQL64 = 11578.

Name	Accession	SEQ ID	Range	Amino acid positions	Clone hits
HDPQL72	760934	1827	1 - 282	Arg-8 to Arg-13, Leu-36 to Asp-73.	H0522: 2
HDPQN03	923168	1828	270 - 449		H0650: 1, H0580: 1 and H0522: 1.
HDPQQ40	949723	1829	1740 - 1048	Arg-5 to Pro-11, Phe-32 to Pro-37, Pro-52 to Arg-59, Ser-75 to Pro-80, Pro-225 to Ser-231.	AR061: 2, AR089: 2 H0486: 3, L0766: 3, L0777: 3, S0002: 2, S0426: 2, L0779: 2, L0759: 2, H0477: 1, L0805: 1, H0522: 1, H0478: 1, L0743: 1, H0445: 1 and H0543: 1.
HDPQQ77	739816	1830	185 - 352	Tyr-1 to Arg-7.	H0522: 2
HDPQR31	741278	1831	3 - 434	Leu-28 to Glu-33, Arg-48 to Gly-53, Pro-60 to Glu-66, Leu-70 to Arg-79, Gly-89 to Gly-96.	H0581: 1, H0522: 1 and H0543: 1.
HDPQU30	768771	1832	250 - 477		H0522: 2
HDPQV63	744471	1833	111 - 320		L0439: 3, H0585: 1 and H0522: 1.
HDPRE08	958933	1834	205 - 351		H0220: 1, H0521: 1, L0754: 1 and L0746: 1.
HDPRE10	961306	1835	123 - 308	Lys-36 to Lys-43.	H0521: 2
HDPRG09	828572	1836	20 - 241	Ser-7 to Ser-23, Asp-56 to Ser-74.	H0090: 1 and H0521: 1.
HDPRH02	919404	1837	68 - 790		L0766: 4, L0769: 3, L0774: 3, L0755: 3, L0761: 2, H0521: 2, L0771: 1 and L0777: 1.
HDPRH59	739077	1838	319 - 450		H0521: 2 and L0766: 1.
HDPRI39	773790	1839	1 - 192	Gly-14 to Gly-19, Gln-30 to Glu-41.	H0179: 1 and H0521: 1.
HDPRL58	724652	1840	73 - 252	Pro-26 to Thr-38.	S0114: 1 and H0521: 1.
HDPRN15	577985	1841	151 - 336	Pro-9 to Lys-16.	H0457: 1 and H0521: 1.
HDPRP29	690399	1842	115 - 420	Leu-64 to Arg-69.	H0635: 3, H0583: 1, H0521: 1 and L0366: 1.

HDPRP83	773394	178 - 465	11595		H0521: 2		
HDPRS79	774077	1 - 249	11596	Glu-6 to Phe-20, Thr-60 to Val-65.	S0428: 1 and H0521: 1.		105580, 133780, 602574, 602574
HDPRY05	958822	101 - 298	11597	Val-32 to Arg-37.	H0521: 2		
HDPRY33	893790	2 - 247	11598	Tyr-39 to Pro-44, Ile-56 to Pro-63.	L0748: 2, S0002: 1, L0659: 1 and H0521: 1.		
HDPRY70	677782	1 - 228	11599	Arg-1 to Gly-7, Ala-9 to Ala-15, Ala-53 to Gly-60.	L0794: 6, L0800: 5, L0771: 3, L0803: 3, L0761: 2, L0764: 2, L0804: 2, H0521: 2, L0750: 2, L0777: 2, H0581: 1, L0769: 1, L0772: 1 and L0757: 1.		
HDPSC55	731496	2 - 238	11600	Arg-11 to Leu-16, Ser-62 to Pro-67.	H0264: 1 and H0521: 1.	11q22	
HDPSG10	961323	3 - 206	11601	Arg-1 to Trp-6, Val-33 to Asp-39.	T0041: 1 and H0521: 1.		
HDPSJ84	782867	1 - 423	11602	Cys-13 to Pro-20, Gly-27 to Ala-35, Gly-78 to Ala-83.	H0087: 1 and H0521: 1.		
HDPSM07	620372	289 - 471	11603	Asn-1 to Asn-6.	H0457: 7, L0662: 2, L0766: 1, L0804: 1, L0806: 1, L0655: 1, L0789: 1, S0216: 1, H0521: 1, L0756: 1 and L0755: 1.		
HDPSO36	959141	1 - 243	11604	Glu-4 to Phe-18, Thr-58 to Val-63.	H0521: 3		
HDPSS57	734507	85 - 315	11605	Gln-34 to Gly-41, Ser-61 to Trp-66, Met-71 to Met-77.	S0116: 1 and H0521: 1.		
HDPSU54	670838	25 - 360	11606		H0521: 2, H0436: 1 and H0543: 1.	14q32.3	
HDPSV04	614924	224 - 424	11607	Trp-27 to Tyr-32.	H0521: 4		
HDPSV29	690415	2 - 358	11608	Ala-1 to Gly-9, Ala-12 to Ser-49, His-59 to Thr-65.	H0521: 4		
HDPSY30	691778	172 - 2	11609	Lys-7 to Ser-21.	H0521: 2		

HDPTC31	878639	80 - 367	11610		H0521: 2
HDPTJ25	706448	160 - 324	11611	Gln-8 to His-15.	H0402: 1 and H0521: 1.
HDPTJ79	669209	592 - 837	11612	Lys-17 to Gly-27.	L0766: 5, L0777: 2, H0255: 1, H0402: 1, S0344: 1 and H0521: 1.
HDPTO71	760142	384 - 647	11613		H0551: 1 and H0521: 1.
HDPTP07	741632	1 - 276	11614		H0521: 2
HDPTS95	906940	111 - 341	11615	Glu-7 to Ile-14, Ala-38 to Leu-44.	H0521: 2 and H0581: 1.
HDPTT20	669029	37 - 234	11616		H0521: 2
HDPTU30	691181	1 - 183	11617		H0521: 2
HDPTU66	697690	40 - 387	11618	Thr-83 to Gly-88.	H0521: 2
HDPTU95	876582	147 - 1	11619	Lys-36 to Ser-49.	H0521: 2
HDPTW90	722699	1 - 282	11620	Gly-13 to Gly-18, Arg-26 to Gly-33, Gly-40 to Gly-49.	AR089: 0, AR061: 0 H0521: 2 and H0641: 1.
HDPUD28	852687	31 - 261	11621	Thr-22 to Gly-29, Thr-34 to Asn-39.	H0521: 1 and H0445: 1.
HDPUF77	769852	39 - 197	11622		H0521: 2
HDPUF94	861520	245 - 400	11623	Tyr-25 to Thr-41.	H0521: 2
HDPUG06	968313	312 - 437	11624		H0402: 1, H0305: 1 and H0521: 1.
HDPUQ02	973235	175 - 588	11625	Gly-1 to Pro-15.	AR054: 2, AR051: 1, AR050: 1 H0521: 5
HDPUS62	604483	3 - 221	11626	Gln-27 to Thr-32, Arg-39 to Ser-45, Lys-53 to Ser-60, Lys-67 to Gln-73.	S0278: 1 and H0521: 1.
HDPVD09	774165	365 - 544	11627	Ser-7 to Asn-17.	S0428: 1 and H0521: 1.
HDPVE36	706712	2 - 385	11628		H0486: 1, L0766: 1 and H0521: 1.
HDPVG11	966556	185 - 922	11629		S0002: 1 and H0521: 1.
HDPVH13	656711	94 - 303	11630	Val-32 to Arg-45.	L0455: 1, H0521: 1 and H0522: 1.
HDPVL94	927023	147 - 365	11631		S0428: 1 and H0521: 1.

HDPVQ96	796133	1880	161 - 274	11632		H0521: 1 and H0445: 1.		
HDPVR71	740340	1881	170 - 307	11633		H0486: 1, H0521: 1 and L0594: 1.		
HDPVU35	852616	1882	164 - 310	11634	Pro-20 to Lys-26.	S0428: 2 and H0521: 2.		
HDPVV46	718160	1883	3 - 359	11635	Arg-1 to Val-9, Pro-19 to Pro-25, Lys-28 to Val-33, Pro-54 to Ala-63, Ser-82 to Glu-93, Pro-100 to His-107, Pro-113 to Gln-119.	H0416: 1 and H0521: 1.		
HDPVV95	582503	1884	182 - 364	11636	Ser-8 to Phe-13, Lys-21 to Arg-32.	S0002: 1 and H0521: 1.		
HDPVW13	656715	1885	198 - 521	11637		H0090: 1 and H0521: 1.		
HDPVY53	727593	1886	1 - 330	11638	Pro-13 to His-21, Asn-34 to Asp-42, Trp-78 to Lys-89.	H0521: 2		
HDPVY58	710458	1887	3 - 152	11639	Leu-6 to Phe-13, Arg-23 to Leu-29, Ser-32 to His-38.	H0521: 3		
HDPWA55	965474	1888	169 - 354	11640	Glu-22 to Ser-28, Asn-45 to Ser-51.	H0591: 1 and H0521: 1.		
HDPWD25	677764	1889	75 - 275	11641	Glu-35 to Ser-40, Gly-55 to Pro-67.	H0521: 2		
HDPWE80	909916	1890	94 - 765	11642	Asp-8 to Cys-21, Val-25 to Asn-33, Thr-47 to Pro-55, Ala-62 to Thr-68, Val-79 to Lys-88, Asn-91 to Asn-104, Tyr-114 to Gly-120, Thr-187 to Glu-192, Ile-217 to Thr-224.	H0521: 9, L0595: 2, L0593: 1 and L0594: 1.		
HDPWE88	857980	1891	170 - 439	11643	Gln-1 to Met-9, Arg-39 to Lys-45, Lys-66 to Leu-75.	H0521: 2	8q22.2	148900, 216550

HDPWH10	967692	1892	2 - 175	11644	Thr-3 to Ser-11.	H0650: 1, H0318: 1 and H0521: 1.		
HDPWN34	703814	1893	294 - 446	11645	Ser-1 to Met-6, Lys-37 to Cys-43.	S0134: 1, L2250: 1, L0766: 1, H0521: 1 and H0543: 1.	5p13	108962, 120940, 217050, 217050, 217070, 245050, 600837, 600946, 600946, 600946
HDPWY46	915964	1894	140 - 475	11646		H0521: 2		
HDPXE68	852626	1895	134 - 421	11647	Ser-43 to Pro-48.	H0521: 2	19q13.4	134790, 191044, 600040, 600138
HDPXF52	726450	1896	34 - 156	11648	Ser-15 to Leu-21.	H0521: 2, L0772: 1, L0764: 1, L0794: 1 and L0805: 1.		
HDPXL59	615543	1897	46 - 402	11649	Arg-45 to Met-52, Glu-75 to Arg-87, Ala-96 to Ser-102, Arg-110 to Ser-116.	L0756: 2, L0731: 2, H0250: 1 and H0521: 1.		
HDPXL68	707532	1898	317 - 619	11650		H0457: 1, H0521: 1 and H0522: 1.		
HDPXP04	614895	1899	501 - 752	11651	Pro-6 to Leu-12, His-21 to Lys-26.	H0581: 1, H0457: 1, H0521: 1 and L0581: 1.		
HDPXU29	852638	1900	359 - 517	11652		H0521: 2		
HDPXW75	951320	1901	284 - 784	11653	Lys-4 to Ser-21.	AR089: 2, AR061: 1 S0278: 1, H0521: 1 and L0740: 1.		
HDPXX01	915914	1902	3 - 197	11654	Arg-19 to Ser-25, His-37 to Ala-42.	H0521: 2		
HDPXZ92	743429	1903	3 - 209	11655		H0556: 1 and H0521: 1.		
HDPYC51	919000	1904	241 - 2	11656		H0521: 2		
HDPYD58	726288	1905	4 - 267	11657	Ser-38 to Gly-43, Ser-66 to Ser-72.	H0521: 1 and H0543: 1.		
HDPYD92	791222	1906	2 - 214	11658	Val-3 to Glu-8, Gly-21 to His-39, Glu-47 to Ile-64.	H0521: 2		
HDPYE96	717598	1907	54 - 497	11659	Thr-16 to Tyr-22, Lys-49 to Ala-58, Thr-67 to Ala-73,	S0212: 1 and H0521: 1.		

HDPYF79	774272	1908	510 - 346	Ala-105 to Arg-111.	S0002: 1 and H0521: 1.		
HDPYH79	886845	1909	3 - 107	Ala-2 to Asp-18.	S0278: 1, H0416: 1, S0428: 1, H0521: 1 and L0749: 1.		
HDQDU40	791340	1910	186 - 458	Arg-1 to Ile-7, Gln-9 to Glu-16.	H0521: 2		
HDQEA94	793378	1911	370 - 606		H0521: 2 and H0264: 1.		
HDQEC77	771351	1912	2 - 550	Arg-1 to Ala-8, Gln-11 to Ser-18, Lys-27 to Thr-34, Ser-40 to Pro-49, Ser-62 to Asn-67, Ser-70 to Phe-84, Arg-86 to Gly-107.	H0521: 2		
HDQEC82	779149	1913	316 - 483	His-38 to Asn-44.	H0521: 2		
HDQEF04	927024	1914	140 - 457	Thr-1 to Thr-9, Arg-43 to Ala-56.	H0521: 1 and S0308: 1.		
HDQEF89	786393	1915	228 - 392	His-12 to Glu-19, Ala-48 to Ala-55.	H0271: 1, H0416: 1 and H0521: 1.		
HDQEJ75	766698	1916	3 - 323	Ser-91 to Ala-107.	H0650: 1, H0488: 1 and H0521: 1.		
HDQEN22	931041	1917	65 - 211	Pro-23 to Lys-30.	H0581: 1 and H0521: 1.		
HDQES62	792766	1918	25 - 216		H0521: 2 and H0445: 1.		
HDQET03	923015	1919	250 - 402	Arg-3 to Arg-8.	H0521: 2		
HDQET24	805486	1920	275 - 559		H0521: 2		
HDQEU26	959940	1921	274 - 423		S0114: 1 and H0521: 1.		
HDQEU63	852614	1922	126 - 374	Pro-14 to Leu-23, Pro-30 to Gly-44.	H0521: 2 and H0522: 1.	16q12-q13	114835, 132700, 172490, 600968
HDQEU92	973212	1923	142 - 279	Ser-1 to Ala-6.	H0521: 3		
HDQFA01	924539	1924	508 - 702		H0250: 4, H0423: 4, L0766: 3, H0657: 2, S0116: 1, H0369: 1, H0581: 1, H0488: 1, H0641: 1, L0792: 1, L0665: 1 and H0521: 1.		
HDQFC85	783797	1925	98 - 541	Glu-29 to Cys-39, Pro-91 to Pro-96,	H0521: 2 and H0090: 1.		

HDQFK04	926758	1926	88 - 345	11678	Arg-109 to Thr-118.	H0635: 1 and H0521: 1.
HDQFU11	966106	1927	2 - 331	11679	Gly-1 to Ala-15, Leu-37 to Lys-42, Ala-54 to Glu-69, Pro-76 to Gly-84.	H0521: 2
HDQFW03	915968	1928	389 - 556	11680	Ile-12 to Gln-21.	H0521: 2
HDQGB04	852577	1929	179 - 358	11681		L0143: 1, H0521: 1 and H0542: 1.
HDQGC76	950734	1930	177 - 299	11682	Lys-17 to Arg-27.	H0521: 1 and H0445: 1.
HDQGG01	974439	1931	3 - 215	11683		H0521: 3
HDQGK63	875920	1932	99 - 395	11684		H0521: 2
HDQGK93	791744	1933	289 - 441	11685	Pro-24 to Pro-30.	H0521: 3, S0144: 1 and S0002: 1.
HDQGQ11	966100	1934	217 - 471	11686		H0521: 2
HDQGR80	880654	1935	199 - 450	11687	Glu-53 to Lys-70, Gly-77 to Asn-84.	H0521: 2
HDQGT70	909848	1936	2 - 448	11688	Gln-1 to Gln-10.	H0521: 5
HDQHF10	963485	1937	273 - 1	11689		H0521: 2
HDQHK04	926988	1938	241 - 540	11690	Ser-8 to Ser-16, His-56 to Phe-61.	L0745: 2, H0581: 1, L0527: 1, H0521: 1 and L0744: 1.
HDQHM43	852556	1939	181 - 345	11691	Gly-19 to Gly-28.	H0521: 1 and H0436: 1.
HDQHO04	926976	1940	6 - 104	11692		H0305: 1, H0589: 1 and H0521: 1.
HDQHO07	852555	1941	133 - 321	11693		H0521: 2
HDQHP44	811790	1942	2 - 430	11694	Phe-6 to Asn-14, Thr-73 to Ala-78, Pro-84 to Glu-90, Ala-94 to Gly-100, Gln-107 to Pro-116.	H0521: 2
HDQHQ83	973129	1943	307 - 119	11695		H0521: 3
HDQHT10	963481	1944	1 - 219	11696	Pro-8 to Ser-39, Cys-44 to Ser-50, Leu-66 to Cys-73.	H0521: 2
HDQHZ10	961336	1945	2 - 349	11697	Gln-3 to Ile-17, Pro-24 to Gly-29,	H0521: 2, S0002: 1 and L0589: 1.

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HDQHZ22	879416	1946	1 - 408	11698	His-67 to Gly-73, Pro-81 to Lys-94.	AR089: 7, AR061: 3 H0521: 2
HDQIH19	974391	1947	421 - 266	11699	Gly-1 to Gly-6, Asp-62 to Arg-68.	H0521: 3
HDQIJ11	966021	1948	34 - 348	11700		H0521: 2, H0421: 1 and L0659: 1.
HDQMA71	926528	1949	432 - 590	11701		H0318: 1 and H0524: 1.
HDQMD13	924108	1950	1 - 273	11702	Thr-1 to Pro-7, His-34 to Arg-40.	H0524: 10
HDQMD14	783547	1951	3 - 209	11703	Arg-1 to Pro-8.	H0524: 10
HDQPI83	780731	1952	135 - 326	11704		H0522: 2
HDRAB68	752316	1953	83 - 169	11705		H0537: 3
HDTAG28	765834	1954	36 - 173	11706		H0486: 1 and S0344: 1.
HDTAQ55	728772	1955	88 - 264	11707	Arg-43 to Tyr-49.	H0159: 1 and H0486: 1.
HDTAY23	973925	1956	79 - 366	11708	Pro-39 to Ser-47.	S0298: 1 and H0486: 1.
	974565	9561	63 - 500	19313	Arg-46 to Leu-58.	H0580: 1, H0486: 1, L0803: 1, L0666: 1 and L0777: 1.
HDTBF27	683389	1957	531 - 656	11709	Lys-1 to Thr-10, Arg-28 to Gln-37.	AR061: 3, AR089: 2 H0485: 1, H0486: 1 and H0457: 1.
HDTBL45	785534	1958	54 - 404	11710	Gly-5 to Cys-12, Glu-26 to Arg-52, Ala-90 to Pro-97, Ala-102 to Glu-107.	AR089: 38, AR061: 5 H0486: 2
HDTBO48	945083	1959	3 - 491	11711		H0090: 2, H0486: 1, L0766: 1, L0743: 1, L0751: 1, L0777: 1 and H0422: 1.
HDTBO74	765555	1960	82 - 234	11712	Ala-1 to Leu-13.	H0486: 1, H0521: 1, L0748: 1 and L0757: 1.
HDTBO94	869818	1961	2 - 301	11713	Leu-24 to Trp-42.	H0486: 2
HDTBQ20	886757	1962	187 - 471	11714	Pro-16 to Thr-26, Pro-31 to Thr-42.	H0486: 2
HDTBQ34	703446	1963	1 - 138	11715	Glu-26 to His-33.	H0486: 2 and L0662: 1.
HDTBQ47	720298	1964	48 - 293	11716	Tyr-51 to Glu-56, Thr-76 to Ala-82.	H0486: 2
HDTBQ56	799840	1965	797 - 1024	11717		L0777: 10, H0486: 4,

HDTBQ80	775420	1966	256 - 369	Leu-22 to Thr-38.	L0666: 2, L0740: 2, L0646: 1, L0662: 1, L0766: 1, L0803: 1, L0633: 1, L0657: 1, L0532: 1, L0663: 1 and L0665: 1.		
HDTBR15	660236	1967	11 - 193		H0486: 2		
HDTBR50	846630	1968	130 - 342	Ala-2 to Glu-7, Arg-50 to Glu-58.	AR089: 41, AR061: 4 H0486: 2		
HDTBV02	920008	1969	291 - 473		H0486: 1 and H0477: 1.		
HDTBV18	893761	1970	379 - 239		H0486: 1 and H0271: 1.		
HDTBW52	726060	1971	319 - 519		H0486: 3 and H0521: 1.		
HDTBX47	719530	1972	107 - 229		H0486: 2		
HDTBY88	934472	1973	3 - 464	His-130 to Lys-140.	AR089: 8, AR061: 2 S0218: 1 and H0486: 1.		
HDTCC60	740350	1974	33 - 215	Asp-14 to Gln-19.	H0306: 1 and H0486: 1.		
HDTDA45	799875	1975	355 - 636	Ala-30 to Ser-53, Pro-60 to Gly-68.	L0748: 3, H0485: 1 and H0486: 1.		
HDTDC23	675331	1976	362 - 523		H0486: 1 and H0521: 1.		
HDTDC53	916348	1977	105 - 233		H0486: 2		
HDTDD49	799872	1978	261 - 443	Thr-25 to Lys-43.	H0486: 1, L0663: 1 and H0436: 1.		
HDTDG42	713588	1979	333 - 205	Tyr-1 to Lys-11, Ser-29 to Lys-43.	H0486: 1 and S0002: 1.		
HDTDG70	587730	1980	83 - 343	Trp-34 to Ile-52, Pro-65 to Gln-70.	H0486: 1, L0766: 1 and H0521: 1.		
HDTDL88	868565	1981	62 - 310	Cys-7 to Ser-15.	H0486: 1, H0318: 1 and L0750: 1.		
HDTDP37	571417	1982	214 - 351	Asp-18 to Lys-26.	H0255: 2 and H0486: 1.		
HDTDT33	587773	1983	1 - 216	Lys-42 to Ser-55.	H0305: 3 and H0486: 1.		
HDTEI19	912765	1984	2 - 313	Ser-42 to Asn-48, Ser-76 to Ser-89.	H0486: 1 and H0439: 1.	19q13.32-q13.33	134790, 152780, 152780, 600040
HDTEJ30	915445	1985	36 - 206		H0486: 1 and H0522: 1.		
HDTEN69	650840	1986	1 - 240		H0486: 1 and H0542: 1.		
HDTES50	964709	1987	3 - 395		AR089: 1, AR061: 1 H0341: 1 and H0486: 1.		

HDTFC55	731397	1988	264 - 530	11740	Glu-15 to Gly-20.	H0255: 1 and H0486: 1.
HDTFD13	835596	1989	36 - 443	11741		H0607: 2, L0745: 2 and H0486: 1.
HDTFE23	675407	1990	22 - 312	11742	Pro-63 to Ser-69.	H0486: 1 and H0521: 1.
HDTFI53	738221	1991	1 - 63	11743		H0486: 1 and H0543: 1.
HDTFP51	924898	1992	2 - 325	11744	Asn-1 to Arg-6.	S0114: 1, H0486: 1 and H0423: 1.
HDTFQ26	681234	1993	161 - 304	11745	Ser-9 to Arg-14.	L0803: 2, S0114: 1, H0486: 1, L0662: 1, L0754: 1 and L0747: 1.
HDTGE59	893721	1994	79 - 186	11746		H0486: 2
HDTGI15	953336	1995	164 - 349	11747	Val-1 to Cys-7, Lys-11 to Pro-18.	H0305: 1, H0486: 1 and L0804: 1.
HDTGJ03	923452	1996	2 - 223	11748	Gly-19 to Phe-27, Lys-42 to Lys-53.	H0608: 1 and H0486: 1.
HDTGJ64	799860	1997	62 - 142	11749	Arg-22 to Ser-27.	H0486: 2
HDTGK27	682689	1998	2 - 112	11750	Glu-26 to Pro-31.	L0717: 1, H0486: 1 and H0421: 1.
HDTGP34	855739	1999	273 - 431	11751	Lys-48 to Lys-53.	H0486: 1, H0063: 1 and L0743: 1.
HDTGP93	724545	2000	54 - 197	11752	Asp-27 to Asp-40.	H0486: 1 and S0052: 1.
HDTGW21	785047	2001	3 - 383	11753	Leu-9 to Ser-14.	H0486: 1 and H0069: 1.
HDTGW52	726197	2002	1 - 114	11754		H0341: 1 and H0486: 1.
HDTHA89	838813	2003	2 - 214	11755		H0486: 1 and H0521: 1.
HDTHB41	711849	2004	170 - 334	11756		H0486: 1 and H0423: 1.
HDTHE95	795180	2005	151 - 330	11757	Ile-24 to Thr-32, Tyr-42 to Arg-48.	H0486: 1, H0444: 1 and H0445: 1.
HDTHK91	789790	2006	229 - 402	11758	Lys-20 to Pro-26, Gly-42 to Ser-47.	H0486: 1 and H0422: 1.
HDTHM43	851854	2007	3 - 233	11759	Pro-1 to Gly-6.	H0486: 2
HDTHO45	799861	2008	1 - 123	11760	Ser-28 to Cys-36.	H0486: 3
HDTHQ15	923899	2009	1 - 612	11761	Arg-36 to Asp-42, Ala-55 to Lys-62, Ser-71 to Gly-81, Ala-87 to Ser-93.	L0766: 2, H0486: 1 and H0521: 1.
HDTHQ55	799859	2010	1 - 198	11762	Gly-1 to Cys-8.	H0486: 2

HDTHW16	799839	2011	329 - 571	11763	Val-28 to Leu-34.	H0486: 2		
HDTHZ46	957669	2012	119 - 370	11764	Pro-44 to Pro-49.	H0255: 1, H0486: 1 and L0748: 1.	22q11	104170, 104170, 104170, 115470, 142360, 188400, 188400, 217095, 600850, 601607
HDTIB38	971665	2013	738 - 529	11765	Asn-18 to Asn-24.	H0486: 2		
HDTIC48	828038	2014	215 - 376	11766		H0486: 2		
HDTIC74	838780	2015	310 - 453	11767	Lys-1 to Lys-7, Thr-24 to Gly-32.	H0486: 2		
HDTID61	908946	2016	332 - 547	11768	Glu-21 to Cys-29, Cys-43 to Thr-53, His-59 to Tyr-72.	AR089: 1, AR061: 0 H0486: 2		
HDTIF01	883070	2017	168 - 527	11769	Met-27 to Glu-34.	AR089: 57, AR061: 40 H0486: 2		
HDTIF90	787413	2018	2 - 259	11770	Cys-37 to Glu-43, Lys-58 to Lys-63, Glu-71 to Asp-78.	H0271: 2 and H0486: 1.		
HDTIG34	799851	2019	191 - 355	11771	Ser-22 to Arg-28, Glu-50 to Arg-55.	H0486: 3		
HDTIH43	935643	2020	260 - 550	11772	Leu-32 to Trp-38.	H0486: 1 and H0436: 1.		
HDTIM13	926952	2021	137 - 451	11773		H0486: 2		
HDTIR88	931122	2022	229 - 411	11774	Tyr-10 to Trp-16.	H0486: 3, L0803: 3, L0774: 2, L0772: 1, L0666: 1, L0740: 1 and L0731: 1.		
HDTIV22	883109	2023	31 - 411	11775	Asn-1 to His-12.	H0486: 2		
HDTIV37	799867	2024	2 - 232	11776	Tyr-14 to Asn-20.	H0486: 2		
HDTIV62	799835	2025	431 - 619	11777		H0486: 2		
HDTIW03	922928	2026	240 - 413	11778		H0486: 2		
HDTIX57	799828	2027	2 - 205	11779	Asn-1 to Glu-11, Glu-60 to Tyr-68.	H0486: 2		
HDTIY24	799854	2028	288 - 404	11780		H0486: 2		
HDTIY26	799855	2029	127 - 312	11781	Cys-2 to Lys-8.	H0486: 2		
HDTIY41	799853	2030	80 - 334	11782	Ser-73 to Lys-79.	H0486: 2 and L0766: 1.		
HDTIY69	799857	2031	71 - 388	11783	Glu-1 to Arg-7, Ser-14 to Gly-21,	H0486: 2		

					Thr-62 to Tyr-68.	
HDTIZ44	925574	2032	1 - 402	11784		L0766: 3, H0486: 2, L0764: 2, H0657: 1, H0271: 1, L0794: 1, H0576: 1 and L0779: 1.
HDTJA54	799856	2033	15 - 77	11785		H0486: 2
HDTJC51	799850	2034	8 - 244	11786	Gln-1 to Lys-13, Ser-49 to Asp-55.	H0486: 3
HDTJI16	918631	2035	2 - 181	11787	Ser-21 to Gly-26.	H0486: 1, L0766: 1 and H0543: 1.
HDTJI37	799834	2036	311 - 553	11788	Glu-1 to Thr-6, Leu-34 to Ala-40.	AR089: 46, AR061: 7 H0486: 2, L0663: 1 and L0754: 1.
HDTJJ02	913787	2037	3 - 116	11789		AR089: 34, AR061: 11 H0486: 2
HDTJJ55	856558	2038	488 - 691	11790	Phe-2 to Gln-11, Arg-24 to His-34, Pro-50 to Val-63.	L0761: 3, L0779: 2, L0777: 2, H0486: 1, H0591: 1, S0426: 1, L0800: 1, S0053: 1 and L0759: 1.
HDTJK81	851897	2039	287 - 469	11791	Glu-8 to Ser-16.	H0486: 2
HDTJQ18	805597	2040	2 - 376	11792	Gly-21 to Cys-27, Gly-32 to Ser-47, Arg-60 to Gln-72, Ser-102 to Leu-107.	H0486: 2
HDTJT70	918563	2041	881 - 1108	11793		H0486: 2 and L0758: 2.
HDTJU06	934242	2042	175 - 291	11794	Lys-11 to Pro-26.	H0486: 2 and H0445: 1.
HDTKP88	799865	2043	349 - 525	11795		H0486: 2
HDTKQ14	886936	2044	1 - 555	11796	Ser-60 to Thr-71, Thr-82 to Leu-94, Gln-113 to Asp-123, Val-125 to Tyr-133, Leu-144 to Gly-149.	AR054: 60, AR051: 40, AR050: 36, AR089: 5, AR061: 2 H0521: 4, H0486: 2, S0002: 2, L0770: 2, L0769: 2, L0766: 2, L0518: 2, L0783: 2, L0777: 2, L0731: 2, H0422: 2, H0556: 1, H0583: 1, H0650: 1, H0657: 1,

HDTKS28	885471	2045	217 - 525	11797	Asp-6 to Glu-11.	H0179: 1, L0055: 1, H0488: 1, S0426: 1, L0662: 1, L0775: 1, L0655: 1, L0665: 1, S0053: 1, H0659: 1, L0754: 1, L0779: 1, L0759: 1 and H0543: 1.
HDTKU06	934269	2046	81 - 260	11798	Ser-30 to Leu-38.	H0486: 2
HDTKX89	799829	2047	191 - 364	11799		H0486: 2 and L0758: 1.
HDTKZ74	799842	2048	449 - 610	11800	Thr-2 to Asn-7.	H0486: 2
HDTLA08	958307	2049	3 - 278	11801	Ser-45 to Lys-53.	H0486: 2
HDTLA53	851826	2050	3 - 170	11802	Arg-18 to Glu-24, Phe-27 to Gly-37.	H0402: 2, H0486: 2 and L0776: 1.
HDTLB55	905872	2051	129 - 518	11803	Ala-15 to Asp-34, Met-43 to Ser-48, Gln-80 to Glu-94.	H0486: 2
HDTLD17	908601	2052	1 - 450	11804		H0580: 1 and H0486: 1.
HDTLH19	959932	2053	42 - 293	11805	Asn-5 to Lys-14, Ala-69 to Ser-74.	AR089: 1, AR061: 0 H0486: 3
HDTLK51	851846	2054	459 - 217	11806		S0114: 1 and H0486: 1.
HDTLN80	805562	2055	326 - 553	11807		H0486: 2
HDTLP72	799837	2056	3 - 161	11808		H0486: 1 and H0521: 1.
HDTLX24	799838	2057	1 - 306	11809	Gln-11 to Glu-17, Lys-44 to Gln-51, Glu-78 to Ser-83.	H0486: 2
HDTMG55	959633	2058	394 - 507	11810	Glu-16 to Val-22.	H0255: 1 and H0486: 1.
HDTMH14	799847	2059	163 - 456	11811	Pro-14 to Leu-29, Ile-66 to Ser-71.	H0486: 2
HEIAA07	920257	2060	1 - 171	11812	Pro-17 to Glu-23, Ala-33 to Leu-40, Leu-48 to Lys-56.	S0140: 9 and H0179: 2.
HEIAA38	907594	2061	191 - 337	11813	Arg-1 to Gly-6.	S0140: 3
HEIAB13	677400	2062	65 - 238	11814	Pro-24 to Gly-34, Gly-49 to Tyr-54.	S0140: 2

HEIAB27	683474	3 - 326	11815		L0766: 2, S0212: 1 and S0140: 1.
HEIAB68	721652	1 - 81	11816	Lys-1 to Lys-14.	S0140: 2
HEIAC83	920022	52 - 132	11817		S0140: 2
HEIAD05	932397	53 - 307	11818	Val-2 to Ala-8, Lys-11 to Cys-17, Glu-28 to Gly-33.	S0140: 2
HEIAE05	932390	102 - 224	11819		S0140: 2
HEIAE76	577254	197 - 301	11820		S0140: 2
HEIAG38	577308	1 - 180	11821		S0053: 2, S0140: 1 and L0665: 1.
HEIAH70	757174	172 - 339	11822	Pro-7 to Asp-12, Lys-29 to Cys-36.	S0140: 2
HEIAL53	466308	82 - 330	11823	Tyr-3 to Val-26, Leu-41 to Ser-48.	S0140: 2
HEIAO01	916438	72 - 242	11824	Trp-1 to Asp-18, Glu-44 to Asn-57.	S0218: 1 and S0140: 1.
HEIAO14	851197	152 - 286	11825	Gly-38 to Ile-44.	S0140: 2
HEIAO48	917281	17 - 175	11826	Thr-48 to Gln-53.	S0140: 2 and T0002: 1.
HEIAO51	725649	85 - 222	11827	Met-8 to Thr-13.	S0140: 2
HEIAT07	953574	3 - 362	11828	Pro-18 to Lys-26.	S0140: 2
HEIAT36	576598	61 - 288	11829	Ala-2 to Ser-9, Lys-41 to Asp-50.	S0140: 2, L0769: 1 and L0790: 1.
HEIAU68	753000	223 - 110	11830		S0140: 2
HEIAV20	523766	129 - 233	11831		H0271: 2, S0140: 1 and H0179: 1.
HEICC82	781171	188 - 334	11832		S0140: 2
HEOAB19	939448	2 - 322	11833	Glu-17 to Ala-35.	H0581: 1 and H0439: 1.
HEOAD29	690762	68 - 277	11834	Glu-6 to Asn-13.	H0439: 1 and S0053: 1.
HEOMC23	850094	215 - 403	11835		H0457: 2
HEOME43	967292	151 - 1350	11836	Gly-1 to Arg-8.	H0255: 1 and H0457: 1.
HEOMF61	573059	2 - 202	11837	Arg-1 to Cys-8, Leu-42 to Val-52.	S0052: 2 and H0457: 1.
HEOMG01	916672	149 - 472	11838	Glu-44 to Ser-59, Cys-67 to Cys-72.	H0457: 3

HEOMG04	922824	2087	3 - 77	11839	Asp-1 to Lys-6.	H0457: 2		
HEOMG16	933969	2088	64 - 360	11840	Asn-2 to Lys-9, Ala-77 to Trp-83.	H0457: 6		
HEOMG25	678190	2089	163 - 357	11841	Pro-16 to Glu-21.	H0457: 6, S0114: 2, H0556: 1 and S0222: 1.		
HEOMG32	699343	2090	139 - 423	11842		H0457: 7		
HEOMG48	963338	2091	3 - 242	11843	Pro-12 to Cys-19, Val-50 to Ser-56.	H0457: 4		
HEOMG78	920911	2092	1 - 330	11844		H0457: 2, H0264: 1, L0748: 1, L0754: 1 and L0593: 1.		
HEOMH04	854342	2093	461 - 667	11845		H0457: 9		
HEOMH31	951834	2094	376 - 603	11846		H0457: 4	5p15.2	123000, 602568
HEOMH77	721342	2095	229 - 390	11847	Pro-11 to Arg-20.	H0457: 8, H0580: 1, H0013: 1, H0250: 1, H0635: 1 and L0766: 1.		
HEOMH89	787109	2096	3 - 347	11848	Asp-1 to Trp-10, Ala-13 to Pro-19, Asp-27 to Lys-45, Pro-47 to Cys-53, Thr-89 to Gly-97.	H0341: 1, H0581: 1 and H0457: 1.		
HEOMK83	918374	2097	225 - 494	11849	Gly-11 to Arg-16, Ser-23 to Trp-31.	H0457: 2 and H0581: 1.		
HEOML13	893874	2098	3 - 353	11850	Glu-9 to Trp-14, Pro-19 to Asp-25, Glu-32 to Glu-42, Gly-66 to Glu-71.	H0457: 3		
HEOML73	724043	2099	302 - 412	11851	Lys-5 to Thr-16.	H0457: 3		
HEOMM10	964736	2100	72 - 209	11852		H0457: 3		
HEOMN02	913819	2101	42 - 539	11853	Arg-3 to Gln-9, Met-30 to Gly-45, Ile-47 to Ile-68.	H0457: 5 and H0581: 1.		
HEOMO43	855659	2102	208 - 411	11854	Lys-9 to Ile-14, Lys-28 to Val-41.	H0457: 2		
HEOMO57	795128	2103	68 - 262	11855	Gly-24 to Ser-30.	H0457: 1 and H0444: 1.		
HEOMP31	698087	2104	178 - 378	11856		H0457: 1, H0521: 1, H0445: 1 and L0600: 1.		

Clone		SEQ ID	Region	SEQ ID		
HEOMP73	750609	2105	164 - 331	11857		H0457: 3
HEOMQ17	851049	2106	173 - 478	11858	Ser-37 to Asp-45.	H0457: 2
HEOMQ75	965882	2107	71 - 196	11859	Leu-16 to Leu-22, Glu-31 to Leu-40.	H0457: 2
HEOMQ80	835599	2108	35 - 202	11860	Gly-1 to Asn-9.	H0457: 2
HEOMR13	657317	2109	375 - 671	11861		H0457: 1 and H0445: 1.
HEOMR57	575739	2110	115 - 204	11862		H0457: 2
HEOMR92	963130	2111	207 - 365	11863	Ser-17 to Arg-30.	H0457: 2
HEOMR96	855652	2112	202 - 432	11864	Asp-1 to Gly-8, Lys-11 to Trp-17, Gly-21 to Cys-44, Ser-70 to Arg-77.	H0457: 2
HEOMS08	959581	2113	54 - 206	11865	Arg-34 to Val-42.	H0457: 2
HEOMS65	969184	2114	281 - 487	11866	Ser-17 to Glu-22.	H0457: 3
HEOMS85	662928	2115	1 - 414	11867		H0457: 1 and H0521: 1.
HEOMS92	735720	2116	3 - 140	11868	Pro-3 to Pro-17, Pro-30 to Pro-42.	H0457: 2
HEOMT38	850980	2117	2 - 427	11869	Arg-1 to Gln-9, Lys-36 to Glu-42.	H0457: 2
HEOMT79	936687	2118	224 - 487	11870		H0457: 3
HEOMU07	953475	2119	234 - 115	11871		H0457: 2
HEOMU23	675971	2120	239 - 388	11872		H0457: 2, H0486: 1, H0264: 1, L0768: 1, L0666: 1, H0436: 1, L0754: 1, H0445: 1 and H0542: 1.
HEOMU79	965900	2121	2 - 283	11873	Pro-36 to Pro-44, Thr-73 to Pro-90.	H0457: 4
HEOMV11	847274	2122	3 - 296	11874	Asp-1 to Gly-19, Gln-49 to Gly-57, Asp-71 to Lys-86.	H0457: 3
HEOMV16	958211	2123	234 - 464	11875	Gly-14 to Lys-24, Glu-34 to Ser-39.	H0457: 3 and L0438: 1.
HEOMV54	866586	2124	293 - 418	11876	Ile-4 to Gln-15.	S0114: 1, H0457: 1 and L0518: 1.
HEOMV81	915093	2125	328 - 504	11877		H0457: 2
HEOMW26	418125	2126	2 - 250	11878	Pro-1 to Pro-7.	H0457: 1 and S0052: 1.

HEOMW83	659808	2127	211 - 336	11879		H0457: 2		
HEOMX04	615337	2128	1 - 180	11880	Thr-12 to Ser-27, Gln-52 to Arg-60.	H0457: 2		
HEOMX61	958233	2129	256 - 435	11881		H0457: 5		
HEOMX65	575919	2130	3 - 206	11882		H0457: 2		
HEOMX92	919200	2131	132 - 434	11883	Ser-35 to Pro-43.	H0457: 5		
	961148	9562	41 - 244	19314	Lys-12 to Ser-19, Thr-35 to Met-40, Pro-43 to Tyr-48.			
HEONC06	855649	2132	119 - 322	11884	Lys-32 to Leu-44, Lys-62 to Cys-68.	H0457: 7		
HEOND75	918209	2133	2 - 304	11885		H0457: 4		
HEONJ79	506226	2134	118 - 300	11886		H0457: 2		
HEONK15	660365	2135	128 - 442	11887	Pro-9 to Ser-15, Ile-24 to Gly-29, Pro-41 to Arg-51.	H0457: 2	19q13.3	113900, 126340, 126391, 130410, 134790, 138570, 160900, 173850, 258501, 600040, 602225, 602225
HEONM30	692726	2136	136 - 270	11888	Leu-5 to Leu-22.	H0457: 2		
HEONM69	855638	2137	95 - 520	11889	Pro-53 to Asn-66, Pro-92 to Ser-98, Ser-106 to Gly-114.	H0457: 4	9q34.13	
HEONN28	745144	2138	133 - 291	11890	Thr-41 to Asn-53.	H0457: 2		
HEONO81	792074	2139	124 - 297	11891	Tyr-29 to Glu-35, Val-47 to Tyr-53.	H0486: 1 and H0457: 1.	1	
HEONP93	792377	2140	133 - 273	11892	Thr-39 to Phe-47.	H0457: 2 and L0740: 1.		
HEONQ08	959556	2141	247 - 528	11893	Ser-12 to Gly-20, Pro-50 to Leu-55.	H0457: 11 and L0543: 1.		
HEONQ19	930705	2142	3 - 806	11894	Ala-13 to Arg-20, Gln-35 to Lys-48.	AR089: 2, AR061: 0 H0457: 9, L0596: 3, L0803: 2, H0673: 1, L0455: 1, L0369: 1, L0764: 1, L0389: 1, L0375: 1, L0655: 1, L0809: 1, L0790: 1 and L0752: 1.		

HEONQ58	965881	2143	315 - 518	Ile-1 to Lys-9.	H0457: 8, H0656: 1 and L0366: 1.	
HEONQ65	967588	2144	3 - 353	Leu-11 to Gly-16.	H0457: 3, S0212: 1 and H0069: 1.	
HEONQ69	556544	2145	2 - 340		H0457: 3, H0264: 2 and H0656: 1.	
HEONU26	577429	2146	3 - 161		S0116: 1, H0457: 1 and H0521: 1.	
HEONU75	851054	2147	1 - 228	Thr-2 to Asn-8, Ser-15 to Pro-27.	H0457: 2	
HEONV59	949152	2148	1 - 279	Ala-3 to Gly-10.	AR061: 0, AR089: 0 H0457: 1 and H0521: 1.	
HEONW15	575812	2149	237 - 392	Phe-9 to Glu-20, Leu-30 to Arg-45.	H0457: 3	
HEONX19	668740	2150	2 - 151	Thr-1 to Ser-6.	L0766: 5, H0402: 1, H0457: 1 and L0779: 1.	
HEONX49	485897	2151	183 - 494	Glu-29 to Leu-34, Asn-36 to His-41, His-45 to Pro-55.	H0457: 2 and H0556: 1.	
	851020	9563	106 - 204			
	851021	9564	582 - 869			
HEOOB36	830013	2152	301 - 375		H0457: 4	
HEOOD03	923505	2153	90 - 314	Pro-6 to Trp-11, Phe-21 to Asp-26.	H0457: 3	
HEOOD59	738991	2154	1 - 213	Pro-21 to Phe-32.	H0457: 2	
HEOOV40	710800	2155	210 - 371		H0457: 3 and H0318: 2.	
HEOPE28	926837	2156	3 - 314	Pro-1 to Lys-21, Lys-28 to Lys-37, Gly-65 to Pro-70, Arg-81 to Asp-86.	H0457: 8	16
HEOPE58	851009	2157	257 - 421	Phe-28 to Val-36, Phe-44 to Pro-49.	AR089: 1, AR061: 0 H0457: 4	
HEOPF03	839868	2158	189 - 377		H0457: 3	
HEOPF18	918405	2159	2 - 310	Val-6 to Tyr-11, Thr-14 to Asn-19, Thr-41 to Arg-50,	H0457: 2	

HEOPF25	934171	2160	127 - 522	Gln-62 to Ile-69, Glu-84 to Trp-89, Thr-93 to Pro-98.	H0457: 6
HEOPF33	969695	2161	22 - 342	Thr-13 to Gly-27, Arg-60 to Gly-69, Gly-98 to Trp-106.	H0457: 6, L0766: 1 and L0789: 1.
HEOPF56	850925	2162	372 - 599	Gln-53 to Trp-58, Ala-66 to Gly-74, Gln-98 to Glu-103.	H0457: 6 and L0036: 1.
HEOPG01	915047	2163	3 - 254	Ser-23 to Ala-32, Pro-57 to Ser-63.	H0457: 5
HEOPI69	883161	2164	142 - 594	Ser-23 to Glu-34, Glu-48 to Gly-55.	H0457: 5
HEOPI73	850936	2165	316 - 540	Gly-7 to Thr-13, Pro-78 to Phe-85.	H0457: 5
HEOPJ41	855634	2166	300 - 473	Ala-1 to Met-6, Arg-15 to Pro-20, Phe-47 to Gly-53.	H0457: 5
HEOPK43	930942	2167	92 - 304	Ser-6 to Ala-12.	H0457: 4
HEOPK47	966327	2168	366 - 500	Pro-27 to His-34, Arg-40 to Ser-48.	H0457: 1 and S0053: 1.
HEOPK52	883170	2169	66 - 356		H0457: 4
HEOPK90	850883	2170	223 - 576	Lys-36 to Met-47, Pro-62 to Trp-73, Gly-75 to Gly-81.	H0457: 9 and S0114: 2.
HEOPN73	851002	2171	172 - 276	Glu-1 to Lys-12, Ser-24 to Gln-35.	H0457: 2 and H0069: 1.
HEOPN78	918205	2172	85 - 327	Pro-6 to Arg-17, Ser-42 to Ser-56.	H0457: 4
HEOPN95	973440	2173	185 - 454	Leu-1 to Glu-6, Asn-28 to Gly-38, Ser-42 to Pro-47.	H0457: 4 and H0423: 1.
HEOPO08	958184	2174	2 - 226		H0457: 4
HEOPP30	850916	2175	68 - 334	Glu-23 to Asn-31, Ser-37 to Ala-43,	H0457: 8

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HEOPQ06	934147	2176	163 - 516	Phe-77 to Trp-89.	H0457: 4
HEOPW04	850948	2177	393 - 596	Pro-21 to Cys-30, Ser-44 to Pro-49, Pro-65 to Ser-70, Cys-74 to Gly-85, Lys-98 to Glu-103.	H0457: 3
HEOPW38	926764	2178	3 - 242	Val-7 to Ser-26, Gln-43 to Arg-49, Lys-69 to Lys-76.	H0457: 3
HEOPW67	840050	2179	212 - 367	Glu-1 to Lys-14.	H0457: 2
HEOPX85	855625	2180	1 - 201	Thr-56 to Asp-62.	H0457: 2
HEOPY05	918438	2181	294 - 434		H0457: 7
HEOPZ02	918407	2182	290 - 505	Thr-42 to Ser-47.	H0457: 5
HEOPZ05	928257	2183	22 - 144		H0457: 2
HEOPZ11	965970	2184	232 - 453	Thr-2 to Cys-15, Arg-34 to Thr-39.	H0457: 3
HEOPZ29	878503	2185	2 - 394	Arg-1 to Gly-8, Ser-52 to Gly-59.	H0457: 3
HEOQB30	909899	2186	175 - 423	Glu-32 to Ser-41, Met-51 to Leu-65, Met-76 to Ala-83.	H0457: 3 and S0002: 1.
HEOQC10	963398	2187	59 - 217	Gln-40 to Leu-47.	H0457: 4
HEOQC64	850981	2188	1 - 153	Ser-32 to Ala-38.	H0457: 2 and L0060: 1.
HEOQC76	909032	2189	106 - 657	Ala-10 to Tyr-22, Phe-31 to Leu-37, Ser-59 to Leu-64, Tyr-70 to Lys-90.	AR089: 1, AR061: 1 H0457: 3 and L0766: 2.
HEOQE04	922876	2190	87 - 260		H0457: 3 and H0069: 1.
HEOQF77	850974	2191	213 - 416		H0457: 3
HEOQG73	958109	2192	2 - 208	His-1 to Thr-12.	H0457: 4 and L0748: 1.
HEOQG80	850971	2193	263 - 451		H0457: 2
HEOQH81	934100	2194	371 - 568		H0457: 6
HEOQI11	965973	2195	396 - 599		H0457: 4
HEOQJ11	879559	2196	125 - 472	Arg-52 to Thr-61, Thr-80 to Ala-88.	H0457: 3

HEOQK70	934370	2197	1 - 297	11949		H0457: 4		
HEOQK72	847285	2198	2 - 160	11950		H0457: 3		
HEOQM83	850964	2199	71 - 601	11951	Arg-1 to Trp-6, Ala-8 to Pro-17, Pro-24 to Trp-41, Pro-46 to Cys-58, Pro-120 to Pro-127.	H0457: 2	3p21.1	150250, 164500, 168468, 182280, 238310, 600163, 601226, 601916
HEOQN06	934202	2200	479 - 772	11952		H0457: 9 and L0366: 1.		
HEOQN15	864110	2201	191 - 30	11953	Lys-1 to Met-17, Pro-26 to Trp-35.	H0318: 1 and H0457: 1.		
HEOQN87	850957	2202	146 - 406	11954	Lys-7 to Lys-15.	H0457: 2 and H0591: 1.		
HEOQP44	942596	2203	157 - 1026	11955	Phe-62 to Arg-67, Gln-92 to Leu-104, Arg-163 to Leu-171, Ile-175 to Thr-182, Ser-237 to Ser-244, Ala-270 to Arg-277.	AR089: 1, AR061: 0 H0457: 2		
HEOQS11	965930	2204	167 - 322	11956	Phe-26 to Asp-33, Ala-42 to Leu-49.	H0457: 5		
HEOQT57	850931	2205	469 - 657	11957	His-7 to Pro-18.	H0457: 6		
HEOQT76	850932	2206	216 - 671	11958	Gly-98 to Pro-104, Phe-122 to Pro-128.	H0457: 2		
HEOQW56	883227	2207	35 - 226	11959		H0457: 2		
HEOQW81	887147	2208	580 - 2	11960	Pro-51 to Gly-58, Arg-78 to Tyr-87, Asp-161 to Ala-166, Pro-187 to Gly-193.	AR050: 124, AR054: 107, AR051: 92 H0457: 5		
HEORC12	969585	2209	73 - 249	11961	Gly-1 to Asn-7.	H0457: 1 and H0422: 1.		
HEORC48	922885	2210	541 - 801	11962		H0457: 3 and L0748: 3.		
HEORE11	965904	2211	571 - 759	11963		H0457: 3 and L0748: 1.		
HEORE22	969579	2212	583 - 699	11964	Thr-10 to Gln-16.	H0457: 12		
HEORE27	850902	2213	106 - 288	11965	Pro-17 to Lys-23, Lys-30 to Gly-46.	H0457: 6 and H0581: 1.		
HEORE79	959572	2214	89 - 295	11966	Thr-8 to Pro-17, Leu-29 to Asp-41, Ser-47 to Glu-55.	H0457: 6		

HEORF12	969580	2215	360 - 497	11967	Glu-5 to Gly-15, Cys-21 to Gln-26, Asn-38 to His-44.	H0457: 3		
HEORH20	934067	2216	3 - 140	11968		H0457: 5		
HEORI90	918166	2217	159 - 263	11969		H0457: 2		
HEORK01	914988	2218	20 - 169	11970		H0457: 2		
HEORM10	963194	2219	3 - 362	11971	Pro-11 to Ile-17.	H0457: 2		
HEORM21	839142	2220	180 - 434	11972	Ser-20 to Thr-31, Arg-33 to Gly-40, Cys-42 to Leu-50, Phe-54 to Arg-63.	H0457: 2	3q25.1-q25.2	222900, 601402
HEORR01	915015	2221	396 - 130	11973	Lys-19 to Ser-24, Ala-46 to Asn-51, Thr-63 to Trp-72.	H0457: 3 and L0749: 1.		
HEORU06	934097	2222	14 - 430	11974	Pro-4 to Gly-10.	H0457: 3		
HEOSI66	850917	2223	287 - 409	11975		H0457: 4		
HEOSJ50	922825	2224	25 - 213	11976		H0457: 2		
HEOSL01	914874	2225	272 - 544	11977	Ser-27 to Gly-32, Ser-47 to Trp-59.	H0457: 7		
HEOSL08	850951	2226	1 - 240	11978		H0457: 2		
HEOSL54	926849	2227	503 - 652	11979		H0457: 7		
HEOSN60	841869	2228	114 - 374	11980		H0457: 3 and H0580: 1.		
HEOSO01	855651	2229	10 - 315	11981	Gly-3 to Asp-9, Ala-15 to Pro-26, Leu-80 to Thr-86.	H0457: 3 and H0486: 1.		
HEOSP05	928270	2230	2 - 199	11982	Pro-31 to Pro-39, Pro-53 to Ile-65, Phe-69 to Glu-80, Pro-97 to Ser-102.	H0457: 2		
HEOSP06	933991	2231	70 - 348	11983	Arg-8 to Ile-20.	H0457: 2		
HEOSR54	855615	2232	2 - 316	11984	Ala-11 to Gln-29, Arg-67 to Ala-72, Pro-77 to Gly-86.	H0457: 2, H0271: 1 and H0423: 1.		
HEOSS04	926483	2233	2 - 178	11985	Pro-2 to Ser-7.	H0457: 2		
HEOST23	965916	2234	296 - 532	11986	Gln-31 to Ser-36,	H0457: 5		

Clone					Residues	Contig notes
HFSAC03	850146	2235	234 - 443	11987	Gln-54 to Gly-79.	H0445: 3, H0306: 2, S0053: 2, H0057: 1, H0179: 1, S0314: 1, L0667: 1, S0428: 1, H0436: 1 and L0599: 1.
HFSAM43	960974	9565	161 - 3	19317	Phe-14 to Trp-27.	H0057: 1 and H0445: 1.
	715700	2236	41 - 175	11988	Ser-45 to Lys-53.	H0402: 2, H0057: 1 and H0436: 1.
HFSAQ59	572813	2237	137 - 3	11989	Gly-9 to Glu-15. His-1 to Ala-6, Ser-29 to Ser-44.	H0402: 1, H0057: 1, L0527: 1, L0809: 1 and H0445: 1.
HFSAV59	675922	2238	11 - 163	11990		H0402: 1, H0057: 1 and L0754: 1.
HFSAX51	572815	2239	413 - 267	11991		H0057: 1 and S0052: 1.
HFSBF09	573315	2240	154 - 387	11992	Pro-14 to Leu-21.	H0057: 2
HFSBG31	504368	2241	3 - 110	11993	Val-16 to Glu-25, Thr-31 to Gly-36.	H0271: 1 and H0542: 1.
HHEAA27	575258	2242	112 - 297	11994		L0717: 1, H0521: 1, H0542: 1 and H0543: 1.
HHEAM44	726856	2243	40 - 279	11995	Ala-1 to His-10.	H0542: 2, L0637: 1 and L0754: 1.
	970602	9566	503 - 799	19318	Gly-8 to Asn-13.	H0542: 2
HHEAW46	718120	2244	2 - 352	11996	His-3 to Pro-11, Pro-36 to Ala-45, Pro-82 to Leu-91, Arg-104 to Trp-114.	H0069: 1 and H0542: 1.
HHEBS24	858417	2245	57 - 320	11997		H0542: 2
HHECK11	924982	2246	47 - 235	11998	Pro-29 to Met-35, Glu-48 to His-55.	S0114: 1 and H0542: 1.
HHECK33	871375	2247	1 - 213	11999		S0002: 1, L0748: 1 and H0542: 1.
HHECM01	916178	2248	117 - 386	12000		H0542: 2
HHECM66	781893	2249	181 - 321	12001		L0764: 3, H0255: 1 and H0542: 1.
HHECO01	915285	2250	3 - 323	12002		H0542: 2 [17]
HHECR08	959125	2251	327 - 557	12003	Leu-33 to Pro-42, Ser-64 to Phe-77.	H0542: 3
HHECT58	973110	2252	126 - 254	12004		H0488: 1 and H0542: 1.
HHECT59	858407	2253	115 - 468	12005		

HHECT70	753842	2254	29 - 160	12006	Lys-27 to Thr-35.	T0042: 1 and H0542: 1.		
HHECX82	915913	2255	2 - 457	12007		H0521: 4, H0522: 1, H0542: 1 and H0543: 1.		
HHEDB31	697806	2256	391 - 591	12008		H0255: 1 and H0542: 1.		
HHEDH57	665762	2257	231 - 413	12009	Ala-24 to Lys-32, Pro-42 to Gln-50.	L0750: 1, S0308: 1 and H0542: 1.		
HHEDJ94	906876	2258	155 - 337	12010	Asn-39 to Gln-47.	H0641: 1 and H0542: 1.		
HHEDM03	923908	2259	203 - 373	12011	Arg-7 to Asn-40.	H0542: 2		
HHEDN93	731067	2260	1 - 171	12012	Cys-12 to Leu-17.	T0002: 1 and H0542: 1.	19q13.4	134790, 191044, 600040, 600138
HHEDO53	973320	2261	2 - 58	12013		H0542: 2, H0543: 2 and H0551: 1.		
HHEDO74	463250	2262	228 - 401	12014		L0779: 3, H0542: 2, L0662: 1, L0766: 1, L0774: 1, L0776: 1 and H0423: 1.		
HHEDP88	878759	2263	3 - 332	12015	Arg-7 to Phe-15.	H0542: 2		
HHEDR27	791847	2264	1 - 459	12016	Pro-38 to Lys-46, Pro-68 to Pro-73, Leu-85 to Trp-126, Gln-147 to Thr-153.	H0069: 2 and H0542: 1.	2q13	129490, 167415, 176860, 176860, 256100
HHEDW03	923340	2265	3 - 422	12017	Lys-27 to Gly-42, Gly-67 to Gly-73, Pro-80 to Thr-105.	H0543: 2 and H0542: 1.		
HHEDW58	735609	2266	289 - 522	12018	Leu-1 to Phe-6, Leu-23 to Asp-33, Pro-35 to Arg-52.	H0486: 1 and H0542: 1.		
HHEEC07	952455	2267	1196 - 1912	12019	Pro-72 to Pro-86, Arg-92 to Val-97, Met-152 to Pro-161, Leu-164 to Arg-172, Gly-205 to Tyr-227, Leu-229 to Asn-239.	H0542: 2		
HHEEC61	741280	2268	24 - 149	12020		H0542: 2		
HHEEK88	702337	2269	62 - 244	12021		L0804: 3, L0662: 2, L0752: 2, L0757: 2, L0758: 2, H0542: 2, L0481: 1, L0021:		

Gene						Amino acid	Data	Cytoband	IDs
HHEEL47	719825	2270	276 - 425	12022	Glu-1 to Ile-15.	1, L0794: 1, L0774: 1, L0775: 1, L0652: 1, L0655: 1, L0659: 1, L0790: 1 and H0576: 1.		
HHEFB29	690073	2271	241 - 399	12023		L0805: 2, H0542: 2, L0776: 1, L0787: 1 and L0779: 1.		
HHEFB73	947568	2272	155 - 316	12024	Gln-15 to Tyr-24.	H0445: 1 and H0542: 1.		
HHEFK12	966292	2273	82 - 273	12025	Lys-1 to Asn-13.	H0580: 1 and H0542: 1.		
HHEFL47	973094	2274	2 - 256	12026	Ala-20 to Ala-25, Asn-60 to Trp-65.	H0542: 2		
HHEFZ58	735615	2275	2 - 223	12027	Arg-23 to Thr-28, Pro-38 to Ala-43, Met-66 to Cys-71.	H0542: 3		
HHEGA66	969467	2276	26 - 124	12028	Asp-1 to Arg-9, Glu-14 to Gln-28.	H0542: 2, L0769: 1 and L0747: 1.		
HHEHC74	974406	2277	448 - 666	12029		H0542: 2		
HHEHD94	964103	2278	1 - 318	12030	Gly-8 to Arg-14, Gly-21 to Glu-34, Ser-39 to Ser-44.	H0542: 3 and H0521: 1.	13q12	121011, 121011, 129500, 253700, 601885, 602221
HHEHU73	923895	2279	61 - 279	12031	Met-22 to Trp-27.	AR089: 64, AR061: 15 H0542: 2		
HHEHW78	973140	2280	161 - 592	12032		H0542: 2 and H0556: 1.		
HHEHJ19	973230	2281	3 - 293	12033	Arg-5 to Gly-15, Pro-42 to Pro-47, Lys-58 to Pro-63.	H0542: 3		
HHEJH30	961974	2282	154 - 438	12034		H0542: 2		
HHEJY91	974407	2283	113 - 328	12035	Thr-42 to Gln-53.	H0542: 2		
HHEKG10	961957	2284	189 - 347	12036		H0542: 2		
HHEKJ20	918032	2285	96 - 227	12037	Val-1 to Gly-6, Arg-18 to Lys-40.	H0542: 2		
HHEKJ27	858384	2286	204 - 449	12038		H0542: 2		
HHEKK06	933849	2287	92 - 250	12039	Ser-31 to Arg-38.	H0542: 2		
HHEKP61	913413	2288	1 - 273	12040		AR054: 2, AR051: 2, AR050: 1 and H0542: 2 and L0749: 1.		

HHEKS53	973233	2289	177 - 461	12041	Ser-22 to Ala-29, Ile-32 to Thr-38, Gln-51 to Arg-59.	H0542: 4
HHELD03	868495	2290	383 - 640	12042		H0581: 1 and H0542: 1.
HHELD11	974419	2291	3 - 152	12043	Lys-1 to Asn-13, Gln-33 to Pro-39, Gln-44 to His-50.	H0542: 3
HHEMA34	704035	2292	77 - 367	12044	Thr-1 to His-6, Pro-58 to Asn-65.	H0265: 1 and H0543: 1.
HHEMA65	719229	2293	5 - 136	12045		S0116: 1 and H0543: 1.
HHEMD28	858303	2294	15 - 158	12046	Asn-9 to Gly-23, Gly-41 to Ser-48.	H0436: 1 and H0543: 1.
HHEMK21	670784	2295	1 - 276	12047	Arg-8 to Pro-17, Asp-36 to Asn-49.	H0543: 2
HHEMN76	752947	2296	301 - 450	12048		H0543: 2
HHEMO91	790100	2297	150 - 269	12049		H0543: 2
HHEMQ56	858289	2298	30 - 314	12050	Gly-20 to Thr-51.	H0543: 2
HHEMQ58	952989	2299	38 - 295	12051	Gly-1 to Gly-13, Ile-35 to Leu-40.	H0521: 1 and H0543: 1.
HHENC18	666335	2300	2 - 118	12052		S0134: 1 and H0543: 1.
HHEND28	468911	2301	173 - 451	12053		H0179: 1 and H0543: 1.
HHEND45	919630	2302	1 - 195	12054	Gly-1 to Lys-7.	AR089: 4, AR061: 2 H0543: 2
HHENE18	806606	2303	63 - 425	12055	Thr-37 to Asp-45.	S0278: 1, H0543: 1 and H0423: 1.
HHENE38	662972	2304	3 - 164	12056		H0543: 2 and S0053: 1.
HHENE47	720255	2305	114 - 350	12057		H0423: 2, H0254: 1, H0250: 1 and H0543: 1.
HHENG31	917904	2306	225 - 524	12058	Pro-1 to Phe-6, Pro-31 to Ser-37, Cys-85 to Asn-90.	L0740: 3, H0657: 2, H0421: 1, L0761: 1, L0662: 1, L0766: 1, L0776: 1, L0512: 1, L0748: 1, L0750: 1, L0758: 1 and H0543: 1.
HHENH93	691023	2307	8 - 391	12059	Thr-1 to Gly-6, Pro-13 to Trp-23, Pro-51 to Trp-65.	H0521: 1 and H0543: 1.

HHENO53	709078	2308	301 - 164	12060	Pro-5 to Lys-21.	H0543: 2
HHENQ16	661841	2309	337 - 561	12061		H0543: 2
HHENR11	966906	2310	596 - 832	12062	Val-15 to Lys-24.	H0069: 1 and H0543: 1.
HHENR78	773537	2311	334 - 188	12063	Lys-1 to Arg-7, Ser-16 to Phe-21.	H0087: 1 and H0543: 1.
HHENV38	657383	2312	3 - 386	12064	Arg-1 to Phe-20, Ser-46 to Pro-57, Lys-63 to Arg-75, Leu-77 to Ala-84, Arg-102 to Trp-117.	L0794: 4, L0803: 4, L0513: 2, H0637: 1, H0063: 1, L0761: 1, L0768: 1, L0809: 1, L0790: 1, L0777: 1 and H0543: 1.
HHENZ86	670837	2313	81 - 269	12065	Cys-18 to Ser-26.	H0521: 1 and H0543: 1.
HHEOF20	861457	2314	2 - 145	12066		H0543: 2
HHEOF58	841978	2315	195 - 374	12067	Ser-15 to Gln-28, Ser-34 to Arg-41, Ser-47 to Phe-60.	H0543: 2 and H0444: 1.
HHEOG17	662948	2316	2 - 205	12068	Gly-1 to Ser-9, Gly-43 to Gly-53.	H0264: 1, S0428: 1 and H0543: 1.
HHEOG67	588154	2317	12 - 158	12069	Lys-7 to Pro-15, Leu-30 to Ala-37.	H0543: 2
HHEOI18	677891	2318	3 - 395	12070	Glu-1 to Arg-8.	H0543: 2
HHEOJ10	911814	2319	2 - 463	12071	Met-64 to Leu-75, Met-78 to Tyr-89.	H0543: 2
HHEOL59	588168	2320	1 - 165	12072		H0543: 2
HHEOX60	734311	2321	212 - 412	12073	Thr-11 to Pro-17, Gln-25 to Phe-31, Gly-35 to Leu-44.	H0543: 2
HHEOZ17	793087	2322	13 - 153	12074		H0421: 1, H0521: 1 and H0543: 1.
HHEPD46	718950	2323	246 - 437	12075	Arg-9 to Val-14, Asn-23 to Lys-30, Gly-47 to Trp-52.	H0063: 1, L0794: 1, H0445: 1 and H0543: 1.
HHEPD73	966828	2324	3 - 290	12076	Pro-19 to Thr-35, Gly-87 to Trp-94.	H0543: 2 and L0657: 1.
HHEPF31	858269	2325	70 - 333	12077	Arg-26 to Trp-32.	H0581: 1 and H0543: 1.
HHEPG15	659664	2326	3 - 449	12078	Gly-40 to Ser-55, Arg-74 to Ser-82,	H0457: 1 and H0543: 1.

HHEPK28	686489	2327	170 - 277	12079	Ser-107 to Val-118, Lys-140 to Lys-145.	H0445: 1 and H0543: 1.
HHEPM73	683270	2328	103 - 204	12080	Glu-1 to Lys-6.	H0543: 2, S0218: 1 and L0763: 1.
HHEPN44	716494	2329	525 - 761	12081	His-9 to Tyr-17.	H0637: 1, L0748: 1, H0445: 1 and H0543: 1.
HHEPR14	869381	2330	376 - 612	12082	Pro-9 to Pro-18, Val-32 to Asn-43.	H0556: 1, L0749: 1 and H0543: 1.
HHEPS91	493744	2331	446 - 270	12083		S0002: 2, H0457: 1, S0426: 1, L0438: 1 and H0543: 1.
	934138	9567	545 - 826	19319		
HHEPZ10	963715	2332	169 - 2	12084		H0543: 2
HHEQB17	918056	2333	209 - 370	12085		H0543: 2
HHEQB47	841899	2334	364 - 477	12086	His-1 to Leu-9.	H0556: 1 and H0543: 1.
HHEQG21	934680	2335	199 - 351	12087		H0543: 2
HHEQG45	717303	2336	139 - 279	12088		H0543: 2
HHEQG52	956214	2337	174 - 64	12089	Lys-1 to Gly-9, Asn-12 to Met-22.	H0543: 2
HHEQG72	922619	2338	3 - 167	12090	Gly-30 to Asn-40.	H0543: 2
HHEQG75	766960	2339	158 - 361	12091	Pro-48 to Pro-54.	H0543: 2
HHEQG86	784752	2340	98 - 346	12092		H0543: 2
HHEQH63	744596	2341	187 - 351	12093	Lys-8 to Ala-15.	H0543: 2
HHEQI07	952416	2342	77 - 205	12094	Pro-37 to Lys-43.	H0543: 2
HHEQI11	966293	2343	98 - 211	12095	Ser-12 to Asn-17.	S0116: 1, H0090: 1, L0748: 1, H0543: 1 and H0423: 1.
HHEQI82	728596	2344	164 - 382	12096	Gly-41 to Gly-49.	H0306: 1 and H0543: 1.
HHEQI89	786607	2345	23 - 172	12097		H0543: 2
HHEQK01	871911	2346	64 - 249	12098		AR089: 7, AR061: 1, L0589: 1, H0542: 1 and H0543: 1.
HHEQO36	707926	2347	37 - 186	12099		H0543: 2
HHEQP38	709076	2348	158 - 313	12100	Pro-15 to His-24.	H0543: 2
HHEQP83	780397	2349	170 - 352	12101	Arg-31 to Gly-38.	S0114: 1 and H0543: 1.
HHEQQ47	699160	2350	119 - 244	12102	Thr-1 to Leu-8,	H0543: 2

Clone							
HHEQS17	662203	2351	226 - 513	12103	Pro-23 to Cys-33.	H0265: 1, S0134: 1 and H0543: 1.	
HHEQU09	755007	2352	271 - 465	12104	Pro-10 to Lys-19, Met-77 to Gln-82.	H0543: 2.	
HHEQV03	923324	2353	252 - 425	12105	Gln-50 to Phe-58.	H0543: 2 and L0002: 1.	
HHEQV39	932851	2354	1 - 711	12106	Leu-7 to Phe-27, Gln-50 to Gln-57.	AR089: 3, AR061: 1 T0042: 1, H0543: 1 and H0422: 1.	
HHEQX60	915561	2355	2 - 400	12107	Ser-61 to Phe-67, Pro-85 to Gln-90.	H0543: 2	
HHEQY32	698633	2356	79 - 234	12108	Gly-19 to Arg-24, Ser-32 to Ala-41.	T0002: 1 and H0543: 1.	
HHERA17	858239	2357	30 - 269	12109	Pro-18 to Trp-27, Pro-48 to Ser-58, Ile-60 to Gln-77.	S0114: 1, H0650: 1, H0254: 1, H0255: 1, H0264: 1 and H0543: 1.	
HHERB03	933271	2358	226 - 432	12110	Pro-11 to Glu-16.	H0543: 3	
HHERB04	854112	2359	342 - 914	12111	Thr-30 to Leu-46, Leu-64 to Ser-73, Asp-107 to Thr-141, Ala-150 to Phe-162, Phe-165 to Ser-173, Ser-182 to Glu-191.	H0591: 1 and H0543: 1.	17
HHERN11	966003	2360	2 - 118	12112	Arg-4 to Gly-16, Phe-24 to Asn-37.	H0543: 2	
HHERO39	858238	2361	171 - 368	12113	Arg-4 to Leu-10.	H0543: 2	
HHERO95	928142	2362	1038 - 1301	12114	Lys-8 to Val-14.	L0766: 5, L0759: 2, H0422: 2, H0650: 1, T0041: 1, L0794: 1, L0659: 1, L0779: 1, L0780: 1, H0543: 1 and H0423: 1.	
HHERQ04	925697	2363	168 - 302	12115	Lys-6 to Ser-11, Thr-38 to Lys-45.	H0543: 2	
HHERQ50	858049	2364	1 - 507	12116		H0090: 1, L0777: 1, L0731: 1, L0758: 1 and H0543: 1.	
HHERU77	934167	2365	213 - 350	12117	Pro-13 to Arg-21,	H0543: 2	
HHERV38	933142	2366	288 - 452	12118	Ser-5 to Asn-11,	H0543: 2, H0264: 1 and	

HHERX04	925700	2367	1 - 399	Pro-37 to Asp-44.	S0426: 1.
HHESF07	952214	2368	365 - 601	Pro-5 to Gly-15.	H0543: 3
				Gln-8 to Met-16, Glu-19 to Leu-28, Ser-35 to Phe-42, Lys-46 to Leu-51, Glu-54 to Thr-65, Lys-70 to Phe-76.	S0114: 1, L0766: 1, L0809: 1, L0749: 1, L0777: 1 and H0543: 1.
HHESG02	918639	2369	98 - 328	Gln-19 to Thr-37, Phe-46 to Phe-60.	H0543: 2
HHESH33	893701	2370	214 - 495	Gly-10 to Thr-17, Trp-39 to Gly-48, Ser-62 to Asp-73.	H0543: 3
HHESI92	792431	2371	155 - 253	Gln-9 to Lys-18.	H0402: 1, H0436: 1 and H0543: 1.
HHESJ03	922998	2372	38 - 163	His-14 to Ser-20.	H0637: 1 and H0543: 1.
HHESK56	779164	2373	17 - 301	Pro-10 to Phe-15.	H0543: 2
HHESN02	918634	2374	243 - 341		H0543: 2
HHESO94	793390	2375	159 - 458	Cys-36 to Val-41, Arg-50 to Ser-59.	H0543: 2
HHESP87	858224	2376	1 - 276		H0543: 2
HHEST60	858220	2377	173 - 3	Gln-30 to Lys-37, Ser-46 to Thr-57.	H0543: 2
HHESU02	918668	2378	306 - 503		H0543: 2
HHESU03	923030	2379	419 - 685		H0543: 2 and S0278: 1.
HHESU54	926341	2380	230 - 409	Ala-10 to Glu-20, Pro-46 to Ser-51.	H0543: 2
HHESU85	783820	2381	4 - 336	Lys-27 to Glu-104.	H0543: 2 and L0547: 1.
HHESV46	935074	2382	241 - 450	Lys-21 to Glu-28, Thr-39 to Leu-45.	S0053: 1, H0444: 1 and H0543: 1.
HHETA53	858211	2383	87 - 368	Gln-28 to Asn-36, His-55 to Lys-72, Leu-74 to Arg-81, Gly-88 to Pro-94.	S0052: 1 and H0543: 1.
HHETB42	973127	2384	65 - 232	Ile-49 to Lys-56.	H0543: 3
HHETC50	927000	2385	36 - 242	Asn-1 to Arg-6,	H0543: 2

HHETD13	858218	2386	360 - 647	12138	Pro-46 to Lys-58.	H0543: 2
HHETE34	974392	2387	426 - 731	12139	Gln-63 to His-69, Met-76 to Arg-82.	H0543: 3
HHETF07	952218	2388	94 - 333	12140	Leu-1 to Tyr-26, Arg-57 to Lys-63.	H0543: 2
HHETF94	793420	2389	84 - 437	12141	Arg-26 to Gly-32, Ala-50 to Met-65.	H0341: 1 and H0543: 1.
HHETK07	848748	2390	130 - 339	12142	Ser-16 to Met-30, Lys-64 to Asp-70.	H0543: 2, H0556: 1 and L0604: 1.
HHETM92	790879	2391	163 - 249	12143	Leu-19 to Arg-29.	H0543: 2
HHETQ54	908567	2392	2 - 532	12144		AR061: 2, AR089: 1 H0521: 1 and H0543: 1.
HHETR21	936252	2393	131 - 712	12145	Thr-45 to Thr-52, Thr-139 to Asp-145.	H0543: 2
HHETR94	793434	2394	275 - 553	12146	Tyr-1 to Thr-7, Pro-13 to Thr-20, Gln-84 to Lys-89.	H0543: 3
HHETS04	926997	2395	86 - 256	12147	Glu-9 to His-25.	H0445: 2, H0402: 1, H0318: 1, H0264: 1 and H0543: 1.
HHETU20	858206	2396	1 - 165	12148	Ala-1 to Met-22.	H0543: 2
HHETV35	784894	2397	222 - 130	12149		H0543: 2
HHETX01	915284	2398	138 - 335	12150	Arg-1 to Lys-16, Gly-30 to Pro-38.	H0439: 1 and H0543: 1.
HHETY79	774171	2399	102 - 287	12151		T0041: 1 and H0543: 1.
HHEUA62	965709	2400	1 - 315	12152	Leu-13 to Met-20, Arg-27 to Leu-67.	H0543: 2, H0318: 1 and T0041: 1.
HHEUC31	795268	2401	3 - 677	12153	Glu-26 to Pro-35, Glu-56 to Ser-62, Gln-67 to Val-73, Ser-77 to Thr-82, Ala-90 to Val-104, Thr-126 to Glu-134, Pro-205 to Pro-211.	AR089: 4, AR061: 2 H0543: 2 and L0596: 1.
HHEUC84	788954	2402	183 - 338	12154		H0543: 2
HHEUE01	915274	2403	22 - 186	12155	Tyr-16 to Tyr-21.	H0543: 2

HHEUE86	784879	2404	3 - 158	12156	Pro-8 to Lys-25, Tyr-37 to Asp-42.	H0556: 1, H0445: 1 and H0543: 1.
HHEUE89	786254	2405	2 - 340	12157		H0069: 1, L0748: 1 and H0543: 1.
HHEUP02	918655	2406	212 - 376	12158	Pro-50 to Ser-55.	H0543: 2
HHEUT33	952043	2407	72 - 263	12159	Ile-8 to Asn-14, Val-53 to Tyr-60.	H0543: 2
HHEUY42	918029	2408	7 - 105	12160		H0543: 2
HHEVI06	933921	2409	24 - 176	12161		L0662: 1, H0576: 1 and H0543: 1.
HHEVL35	965644	2410	1 - 105	12162		H0543: 2
HHEVN07	952041	2411	94 - 315	12163		H0543: 2
HHEVR07	952070	2412	60 - 305	12164	Pro-24 to Gln-32.	S0114: 1 and H0543: 1.
HHEVS63	973213	2413	418 - 576	12165	Asp-1 to Lys-8.	H0543: 3
HHEVS95	957950	2414	204 - 407	12166	Ser-32 to Tyr-38, Pro-56 to Ser-61.	H0543: 2
HHEVV64	974520	2415	267 - 506	12167	Glu-44 to Thr-63.	H0318: 1, H0063: 1, H0679: 1 and H0543: 1.
HHEWE44	973219	2416	170 - 454	12168	Thr-14 to Glu-24, Pro-33 to Gly-39.	H0543: 3
HHEWF40	973234	2417	618 - 788	12169		H0543: 3
HHEWL08	957946	2418	220 - 26	12170	Gln-1 to Lys-9, Cys-28 to Pro-37, Asp-39 to Val-47.	H0543: 2
HHEWT52	858116	2419	139 - 309	12171		S0114: 1 and H0543: 1.
HHEWU52	935243	2420	3 - 221	12172		H0543: 2
HHEWU93	973141	2421	201 - 392	12173	His-7 to Ser-13, Tyr-33 to Phe-38.	H0543: 3
HHEWY63	858114	2422	97 - 372	12174	Gln-49 to Asn-57.	H0543: 2
HHEXD07	951983	2423	1 - 156	12175		H0543: 2 and L0599: 1.
HHEXK51	932911	2424	172 - 26	12176		H0158: 1, S0426: 1 and H0543: 1.
HHEXX06	933858	2425	1 - 240	12177	Ala-50 to Tyr-56.	H0265: 1 and H0543: 1.
HHEXY05	920532	2426	69 - 401	12178	Cys-31 to Ile-46.	H0305: 3 and H0543: 2.
HHEYG35	878225	2427	130 - 426	12179	Lys-59 to Ser-64,	S0002: 1 and H0543: 1.

					Pro-76 to Ser-82.		
HHEYK30	961960	2428	2 - 493	12180	Ala-9 to Arg-15, Cys-17 to His-26, Gly-34 to Leu-43, Glu-58 to Lys-65, Gln-70 to Met-78, Val-147 to Asp-154.	H0486: 1, L0527: 1, H0521: 1 and H0543: 1.	
HHEYK73	847483	2429	246 - 449	12181	Gln-2 to Asp-9, Arg-22 to Tyr-28, His-53 to Asn-59.	H0543: 2, H0069: 1 and H0635: 1.	
HHEYP70	861923	2430	13 - 441	12182	Glu-1 to Gly-6, Leu-30 to Pro-41, Gly-100 to Gly-107, Lys-124 to Asn-131.	H0543: 2	
HHEYQ78	963321	2431	61 - 246	12183	Ser-8 to Lys-15, Glu-30 to Thr-36.	H0581: 1 and H0543: 1.	8
HHEYV03	922104	2432	238 - 390	12184	Ser-1 to Phe-6.	H0625: 1, L0740: 1 and H0543: 1.	
HHEYZ12	968939	2433	1 - 150	12185	Gln-45 to Asp-50.	H0543: 2	
HHEZA83	973236	2434	313 - 555	12186	Ile-1 to Gly-6, Pro-44 to Gln-52.	H0543: 3	
HHEZJ38	860048	2435	331 - 471	12187	Val-1 to Asp-7.	L0455: 1, S0053: 1 and H0543: 1.	
HHEZP45	952047	2436	47 - 148	12188	Met-1 to Arg-6.	H0543: 2	
HHEZP54	952367	2437	57 - 236	12189		S0114: 1, H0521: 1, H0444: 1 and H0543: 1.	
HHFHP14	960049	2438	2 - 208	12190	Arg-2 to Gln-8.	H0584: 21, H0167: 7 and H0050: 1.	
HILAA18	657314	2439	200 - 322	12191	Ser-2 to Arg-7.	T0002: 1, H0486: 1 and H0445: 1.	
HILBD61	504130	2440	102 - 377	12192	Lys-1 to Gly-7.	H0090: 2 and T0002: 1.	
HILCD94	887182	2441	419 - 595	12193	Met-1 to Arg-11, Asn-29 to Lys-34.	AR051: 42, AR054: 32, AR050: 31 L0766: 3, L0804: 2, T0002: 1, H0580: 1, L0662: 1, L0803: 1, L0805: 1, L0789:	

							1, L0749: 1 and L0779: 1.	
HJAAH06	960647	2442	2 - 370	12194	Arg-1 to Asn-10, Pro-17 to Lys-22, Thr-30 to Thr-57, Val-63 to Leu-69, Ser-79 to Arg-100.		H0090: 1 and T0041: 1.	
HJAAM73	530476	2443	155 - 421	12195	Gln-1 to Ser-19, Glu-31 to Thr-36.		H0354: 1 and T0041: 1.	
HJAAT23	530472	2444	70 - 450	12196			L0749: 2, S0116: 1, L0717: 1, T0041: 1 and L0662: 1.	
HJAAU52	530473	2445	2 - 301	12197		19q13.3	H0306: 1, T0041: 1 and L0589: 1.	113900, 126340, 126391, 130410, 134790, 138570, 160900, 173850, 258501, 600040, 602225, 602225
HJAAU57	661275	2446	1 - 165	12198			T0041: 2	
HJAAV29	669278	2447	3 - 299	12199			S0218: 1, H0264: 1 and T0041: 1.	
HJAAV82	738993	2448	523 - 681	12200			H0591: 2, T0041: 1, L0745: 1 and L0777: 1.	
HJAAW39	530468	2449	114 - 272	12201			S0114: 1 and T0041: 1.	
HJAAW48	530641	2450	2 - 244	12202			H0063: 1 and T0041: 1.	
HJABB37	530467	2451	3 - 434	12203	Lys-5 to Asn-15, Pro-33 to Lys-38.		H0264: 1 and T0041: 1.	
HJABC27	669059	2452	2 - 253	12204	Pro-17 to Ile-22, Ile-39 to Arg-45.		S0134: 1 and T0041: 1.	
HJABH14	530463	2453	145 - 324	12205			T0041: 2	
HJABJ06	954589	2454	1 - 186	12206			H0264: 2 and T0041: 1.	
HJABP04	925557	2455	305 - 436	12207	Ser-6 to Gly-11, Asp-23 to Thr-32.		T0041: 1 and H0423: 1.	
HJABV44	871824	2456	325 - 537	12208	Lys-2 to His-10.		S0134: 1 and T0041: 1.	
HJABV57	839528	2457	145 - 2	12209	Lys-28 to Gly-36, Arg-43 to Arg-48.	14q24.3	T0041: 1 and S0002: 1.	104311, 109150, 182600, 245200, 601208
HJABW28	958721	2458	20 - 238	12210			H0305: 7, L0748: 2, H0583:	

HJABX33	966611	2459	214 - 438	12211		1, H0589: 1, L0471: 1, T0041: 1, H0134: 1 and L0589: 1.	
HJABY68	861548	2460	292 - 495	12212		T0041: 1, H0521: 1 and L0600: 1.	
HJABZ52	857454	2461	37 - 276	12213	Pro-4 to Lys-12, Arg-41 to Pro-57.	T0041: 2	
HJACB80	746411	2462	123 - 323	12214	Arg-35 to Ser-41, Gly-59 to Thr-64, Cys-72 to Phe-77.	H0650: 1, T0041: 1, L0766: 1, L0740: 1 and L0777: 1.	
HJACC59	534867	2463	19 - 321	12215	Glu-25 to Arg-30.	L0622: 1, S0182: 1, T0041: 1, L0789: 1 and L0749: 1.	
HJACC67	518222	2464	18 - 284	12216		T0041: 2	
HJACE47	589114	2465	6 - 152	12217	Cys-5 to Gln-10.	T0041: 2	
HJACE79	666768	2466	2 - 256	12218	Lys-6 to Leu-11.	H0265: 1, S0134: 1, H0486: 1 and T0041: 1.	
HJACF14	659329	2467	225 - 389	12219	Tyr-1 to His-6.	T0041: 2	
HJACF47	507156	2468	109 - 399	12220		S0116: 1 and T0041: 1.	
HJACH86	784634	2469	3 - 266	12221	Arg-1 to Gly-10, Ala-20 to Cys-27.	H0341: 1, T0041: 1, L0523: 1 and L0747: 1.	
HJADD60	708664	2470	97 - 216	12222		S0218: 1, H0580: 1 and T0041: 1.	
HJBAB01	961088	2471	51 - 305	12223	Arg-28 to Thr-33.	L0766: 4, S0114: 1, T0041: 1, S0002: 1 and S0426: 1.	
HJBAD34	508225	2472	51 - 134	12224	Pro-1 to Asn-12.	T0042: 1 and H0543: 1.	
HJBAG75	523069	2473	1 - 279	12225	Ala-19 to Ser-25, Glu-31 to Thr-38, Gly-47 to Gly-52, Phe-58 to Ser-72, Pro-75 to Ala-86.	T0042: 2	
HJBAT26	522697	2474	19 - 150	12226		T0042: 2	
HJBAX43	929793	2475	73 - 288	12227	Asp-18 to Pro-26.	T0042: 2	
HJBBD13	765075	2476	2 - 211	12228		H0341: 3 and T0042: 1.	AR061: 88, AR089: 72, AR051: 63, AR050: 45, AR054: 28

Clone	No.	SEQ	Range	SEQ ID	Description	Notes	Chr.	Identifiers
HJBCP53	574259	2477	53 - 316	12229		H0486: 1 and T0042: 1.		
HJBDB28	839067	2478	21 - 212	12230	Pro-6 to Asp-15.	T0042: 2		
HJBDG57	750669	2479	81 - 455	12231	Leu-13 to Arg-19, Ala-22 to Gln-29, Pro-38 to Arg-43, Gly-68 to Arg-76, Arg-91 to Trp-100, Thr-108 to Tyr-120.	T0042: 1 and S0426: 1. / T0042: 2	3q21	106165, 117700, 117700, 150210, 169600, 180380, 180380, 180380, 190000, 203500, 232050, 276902, 600882, 601199, 601199, 601199, 601471, 601682
HJBDL14	960109	2480	89 - 361	12232	Ser-4 to Pro-16, Gly-23 to Ala-32.	H0305: 3, H0581: 1, T0042: 1, L0438: 1 and L0756: 1.		
HJKSB86	523007	2481	1 - 138	12233		H0202: 2 and H0203: 1.		
HJPAH35	509162	2482	203 - 301	12234		H0083: 2		
HJPAT51	730875	2483	179 - 271	12235	Lys-1 to Trp-13.	H0306: 1 and H0083: 1.		
HKBAC12	857298	2484	435 - 713	12236	Gly-28 to Thr-36.	H0264: 1 and H0625: 1.		
HKBAQ43	934251	2485	1 - 57	12237		H0625: 2		
HKBAT27	963724	2486	2 - 169	12238		H0580: 1, H0581: 1 and H0625: 1.		
HLADA25	791845	2487	13 - 219	12239		H0608: 4 and H0436: 4.		
HLADA89	786490	2488	1 - 483	12240	Pro-7 to Gln-13, Leu-30 to Asp-35, Pro-47 to Cys-64, Ser-86 to Asn-98.	H0638: 1, H0608: 1, H0611: 1 and L0362: 1.		
HLCDB78	760896	2489	2 - 151	12241	Gly-29 to Arg-34.	L0766: 2, H0305: 1 and H0607: 1.		
HLEAO21	531287	2490	2 - 109	12242	Asp-31 to Glu-36.	H0073: 1 and H0521: 1.		
HLEDB91	787578	2491	2 - 121	12243	Thr-16 to Ile-22.	H0609: 1 and H0610: 1.		
HLKDB22	766876	2492	614 - 850	12244	Asn-1 to Ser-8.	H0611: 2, L0749: 2, L0777: 2, L0764: 1 and H0522: 1.		
HLKDC49	722400	2493	412 - 582	12245	Glu-10 to Ile-20.	L0731: 2, H0611: 1, H0090: 1, L0659: 1, L0666: 1, L0752: 1 and H0543: 1.		
HLLCD11	967337	2494	2 - 334	12246		S0212: 1 and H0354: 1.		

HLMAC43	799766	140 - 382	12247	Leu-10 to Pro-15, Arg-43 to Pro-50.	H0254: 3 and H0255: 2.
HLMAE45	783886	20 - 193	12248	Arg-12 to Ser-21.	H0556: 1, H0254: 1 and H0255: 1.
HLMAE62	796676	71 - 175	12249	Ser-1 to Val-7, Gly-17 to Gly-33.	H0254: 2 and H0255: 1.
HLMAE83	530107	2 - 238	12250	Cys-11 to Asp-20, Lys-62 to Ser-68.	H0254: 1 and H0255: 1.
HLMAH45	954125	59 - 289	12251	Gln-1 to Asn-6.	H0254: 2, L0754: 2, L0755: 2, L0761: 1 and L0776: 1.
HLMAH60	856858	2 - 121	12252	Lys-1 to Arg-12, Pro-29 to Leu-38.	H0254: 1 and H0255: 1.
HLMAJ54	811183	97 - 348	12253	Phe-9 to Gly-16.	H0254: 1 and H0255: 1.
HLMAJ84	615300	11 - 256	12254	Arg-6 to Ser-11.	H0254: 1 and H0421: 1.
HLMAN25	677519	101 - 166	12255		H0254: 1 and H0255: 1.
HLMAU11	954571	96 - 299	12256	Pro-10 to Trp-17.	H0254: 2
HLMAU43	856884	3 - 149	12257		H0254: 2
HLMAU70	732665	24 - 299	12258		H0254: 1 and H0255: 1.
HLMAV62	671905	48 - 140	12259	Thr-8 to Cys-13.	H0255: 2 and H0254: 1.
HLMAZ06	960557	151 - 312	12260	Ser-36 to His-45.	L0766: 2, H0254: 1, H0402: 1 and L0748: 1.
HLMAZ14	932679	119 - 262	12261	Lys-1 to Gly-14, Cys-17 to Phe-23, Glu-29 to Arg-46.	H0254: 2
HLMAZ72	821500	428 - 604	12262	Leu-20 to Gly-25, Gln-47 to Ser-59.	H0254: 1 and H0179: 1.
HLMAZ91	920216	129 - 251	12263	Gln-2 to Lys-8.	H0254: 1 and H0255: 1.
HLMBB25	792549,	1 - 243	12264	Pro-49 to Lys-54, Arg-76 to Arg-81.	H0255: 2
HLMBB43	530611	3 - 212	12265	Glu-20 to Ser-34.	H0255: 2
HLMBB56	968209	1 - 192	12266	Gly-1 to Cys-7, Pro-29 to Asn-36, Gln-58 to Arg-64.	H0255: 6
HLMBB77	799744	206 - 343	12267		H0255: 2 and H0254: 1.
HLMBB80	950730	217 - 369	12268		H0255: 3
HLMBF68	753614	142 - 372	12269		S0114: 1 and H0255: 1.

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HLMBQ04	615621	2518	370 - 242	Arg-8 to Glu-14, Ile-31 to Arg-43.	H0255: 1 and H0445: 1.
HLMBQ77	954969	2519	168 - 533	Pro-26 to Pro-40.	H0457: 2, H0255: 1, H0580: 1, S0002: 1 and L0766: 1.
HLMBU64	577608	2520	1 - 240	Ala-10 to Gly-16, Tyr-53 to Ile-61.	H0255: 2
HLMBU82	799755	2521	2 - 202	Gly-1 to Cys-7, Leu-45 to Asn-51, Ser-53 to Pro-59.	H0255: 4
HLMBV11	967669	2522	22 - 315	Ser-8 to Arg-17, Arg-49 to Trp-59, Leu-67 to Gly-85.	H0255: 1 and H0422: 1.
HLMBV14	682023	2523	130 - 366	Gly-31 to Arg-36, Ser-50 to Tyr-58.	H0255: 2
HLMBV24	825595	2524	4 - 180	Glu-1 to Ser-6.	H0255: 3
HLMBV72	688069	2525	182 - 307		H0255: 2
HLMBW11	950728	2526	33 - 782	Arg-41 to Phe-47, Glu-51 to Gly-56, Arg-64 to Asn-73, Leu-86 to Lys-96, Pro-98 to Val-111, Thr-119 to Met-124, Gln-126 to Trp-166, Cys-168 to Thr-177, Ser-214 to Leu-220, Gln-229 to Trp-244.	H0255: 2 and L0766: 2.
HLMBX06	954576	2527	95 - 316	Pro-62 to Ser-67.	H0265: 2, H0556: 2, H0255: 2 and H0423: 1.
HLMBX19	879667	2528	1 - 246		H0255: 2
HLMBY16	531053	2529	1 - 156	Lys-1 to Gly-11, Ser-17 to Ala-26.	H0255: 2
HLMBZ31	967640	2530	7 - 123	Pro-6 to Gly-14.	H0255: 2
HLMBZ47	577605	2531	79 - 201	Glu-16 to Met-21.	H0255: 1 and H0402: 1.
HLMBZ73	531401	2532	28 - 222		H0255: 2
HLMCA13	790952	2533	118 - 411	Thr-32 to Lys-37, Thr-52 to His-60.	H0254: 1, S0216: 1 and L0439: 1.

HLMCA22	529185	2534	59 - 205	12286		H0254: 2		
HLMCJ32	799767	2535	183 - 350	12287		H0254: 3 and H0255: 2.		
HLMCJ64	739397	2536	208 - 321	12288	Glu-21 to Asn-37.	H0254: 1 and H0255: 1.		
HLMCJ66	707231	2537	1 - 96	12289		H0254: 2		
HLMCK45	698342	2538	84 - 281	12290	Gly-3 to Glu-9.	H0254: 1, H0255: 1 and H0271: 1.		
HLMCL50	921041	2539	14 - 193	12291	Lys-21 to Lys-29.	H0254: 2		
HLMCL93	799699	2540	3 - 371	12292	Trp-8 to Pro-14, Thr-85 to Gly-91.	H0254: 2, H0556: 1, S0116: 1, H0255: 1 and L0604: 1.		
HLMCT06	954615	2541	3 - 131	12293		H0254: 2 and H0255: 2.		
HLMCT15	507212	2542	79 - 258	12294	His-50 to Lys-55.	H0254: 2		
HLMCT24	921543	2543	59 - 217	12295	His-33 to Arg-41.	H0254: 3 and H0255: 1.		
HLMCT79	916590	2544	64 - 180	12296	Arg-16 to Glu-25.	H0254: 1 and H0255: 1.		
HLMCT93	888976	2545	129 - 290	12297	Ser-44 to Gln-49.	AR051: 20, AR050: 19, AR054: 10		
HLMDE76	529184	2546	5 - 106	12298		H0254: 1 and H0255: 1.		
HLMDF04	694910	2547	2 - 67	12299		H0254: 2		
HLMDF14	799739	2548	201 - 383	12300		H0255: 2 and H0254: 1.		
HLMDF52	571415	2549	54 - 182	12301	Glu-17 to Pro-26.	H0254: 1 and H0255: 1.		
HLMDH54	527128	2550	353 - 475	12302	Val-33 to Ser-40.	H0254: 2, S0114: 1 and H0422: 1.		
HLMDH78	532741	2551	1 - 261	12303		H0254: 2	14q11.2	182600, 186880, 190195, 190195, 222700, 600243, 602279, 602279
HLMDJ37	577239	2552	60 - 365	12304		H0254: 1 and H0255: 1.		
HLMDJ48	720893	2553	2 - 205	12305	His-6 to Gly-16, Phe-23 to Leu-38, Gly-56 to Ser-64.	H0254: 1 and H0255: 1.		
HLMDN83	799742	2554	23 - 352	12306	Pro-9 to Trp-15, Lys-63 to Tyr-74.	H0255: 2 and H0254: 1.		
HLMDOO2	920859	2555	3 - 149	12307	Glu-9 to Lys-15, Glu-27 to Lys-33, Ser-38 to His-43.	H0254: 2 and H0255: 1.		
HLMDO18	527896	2556	2 - 148	12308	Gly-17 to Gly-29,	H0254: 2		

HLMDO61	584982	2557	20 - 103	12309	Arg-41 to Gln-49.	H0254: 2
HLMDO65	742749	2558	3 - 419	12310	Lys-1 to Asn-6, His-1 to Thr-6, Phe-19 to Arg-25, Pro-44 to Leu-54, Lys-57 to Asn-64.	H0254: 1 and H0255: 1.
HLMDP35	535500	2559	2 - 259	12311		H0254: 2
HLMDQ37	531232	2560	2 - 121	12312		H0254: 2
HLMDQ40	531234	2561	3 - 200	12313	Pro-4 to Ser-16, Gln-59 to Gln-64.	H0254: 1 and H0255: 1.
HLMDQ60	920837	2562	168 - 380	12314	Arg-29 to Tyr-34.	H0254: 2 and H0255: 1.
HLMDR16	530103	2563	2 - 127	12315	Ala-12 to Val-17.	H0254: 2
HLMDR33	959707	2564	235 - 429	12316		H0255: 3 and H0254: 2.
HLMDR70	531235	2565	17 - 106	12317		H0254: 2
HLMDT17	531231	2566	5 - 145	12318		H0254: 2
HLMDU04	571393	2567	3 - 170	12319	Gly-10 to His-21.	H0254: 1 and H0255: 1.
HLMDU07	930471	2568	103 - 297	12320	Gln-52 to Tyr-62.	H0254: 1, H0255: 1 and L0794: 1.
HLMDU17	528040	2569	3 - 233	12321	Glu-17 to Pro-26.	H0254: 2
HLMDU43	575607	2570	2 - 373	12322		L0769: 3, S0052: 2, H0254: 1, H0255: 1, S0002: 1, L0639: 1, L0761: 1, L0800: 1, L0641: 1 and L0794: 1.
HLMDU54	856877	2571	112 - 324	12323	Pro-18 to Arg-46.	H0254: 1 and H0255: 1.
HLMDU71	531228	2572	1 - 132	12324		AR089: 2, AR061: 1 H0254: 2
HLMDU96	799729	2573	99 - 269	12325	Val-6 to Pro-11.	H0254: 2 and H0255: 1.
HLMDV96	934543	2574	600 - 788	12326	Ser-33 to Cys-39.	S0216: 2, S0114: 1, H0254: 1, H0255: 1, H0635: 1, H0271: 1, L0748: 1 and H0423: 1.
HLMDW28	531230	2575	253 - 29	12327		H0254: 2
HLMDW58	799749	2576	20 - 295	12328	Cys-16 to Lys-23.	H0254: 3
HLMDX46	523771	2577	85 - 210	12329	Thr-14 to Val-25, Lys-31 to Thr-42.	H0254: 2
HLMDX59	739523	2578	122 - 418	12330		H0254: 1 and H0305: 1.

HLMDX71	799758	2579	3 - 215	12331	Gln-1 to Leu-25, Ala-66 to Trp-71.	H0254: 2 and H0255: 2.
HLMDY24	531219	2580	174 - 422	12332	Gly-3 to Thr-11, Gln-14 to His-20, Glu-46 to Ser-57.	H0254: 2
HLMDY48	666518	2581	1 - 132	12333	Gly-1 to Ala-7, Phe-9 to Thr-15.	H0254: 1 and H0255: 1.
HLMDY56	518410	2582	2 - 106	12334		H0254: 2
HLMFA56	730947	2583	35 - 217	12335		H0255: 2
HLMFA72	531359	2584	43 - 267	12336		H0255: 2
HLMFB58	577643	2585	87 - 242	12337	Asp-1 to Ser-10.	H0255: 2
HLMFD75	799682	2586	2 - 307	12338	Ser-4 to Ser-12.	H0264: 3 and H0255: 1.
HLMFG58	573130	2587	357 - 169	12339	Leu-1 to Glu-7.	H0255: 1 and S0052: 1.
HLMFG66	676040	2588	3 - 389	12340	His-1 to Leu-8, Gln-54 to Ala-61, Gln-91 to Leu-100.	H0255: 2
HLMFH74	671941	2589	156 - 329	12341	Ile-11 to Arg-17.	H0255: 2
HLMFI89	526929	2590	2 - 184	12342	Lys-15 to Arg-20.	H0255: 2
HLMFK45	531222	2591	112 - 252	12343		H0254: 1 and H0255: 1.
HLMFK63	888660	2592	1 - 588	12344	Arg-8 to Gly-17.	AR051: 139, AR050: 138, AR054: 114 H0255: 3
HLMFK70	856861	2593	67 - 201	12345	Ser-23 to Trp-31.	H0254: 1 and H0255: 1.
HLMFK92	571369	2594	143 - 373	12346	Glu-1 to Ala-6.	H0255: 2
HLMFL71	526928	2595	113 - 367	12347		H0255: 2
HLMFN24	781780	2596	3 - 326	12348		H0254: 1 and H0255: 1.
HLMFN68	799751	2597	2 - 226	12349		H0255: 2 and H0254: 1.
HLMFR49	842045	2598	33 - 179	12350		H0255: 2
HLMFR72	799709	2599	3 - 215	12351		H0255: 3, L0745: 2 and L0383: 1.
HLMFU09	909666	2600	22 - 216	12352	Gly-18 to Arg-23.	H0625: 2, H0254: 1, H0255: 1, H0576: 1 and L0749: 1.
HLMFU13	657283	2601	87 - 209	12353	Lys-29 to Leu-40.	H0255: 2
HLMFU39	856872	2602	143 - 340	12354	Gln-8 to Val-13.	L0439: 2, H0255: 1, L0021: 1, H0318: 1, L0655: 1,

HLMFU52	727197	2603	2 - 331	12355	Pro-47 to His-53.	S0428: 1, L0352: 1 and H0423: 1.
HLMFU90	699667	2604	15 - 200	12356	Asn-29 to Thr-34.	H0255: 2
HLMFW19	534799	2605	3 - 197	12357	Leu-12 to Arg-17.	H0254: 1 and H0255: 1.
HLMGK40	531355	2606	163 - 351	12358	Asn-44 to Arg-51.	H0254: 1 and H0255: 1.
HLMGK50	927675	2607	36 - 233	12359		H0254: 1 and H0255: 1.
HLMGP66	799725	2608	105 - 302	12360		H0254: 1, H0255: 1 and L0766: 1.
HLMGP96	531225	2609	17 - 160	12361		H0255: 3
HLMGY13	921457	2610	163 - 294	12362		H0254: 1 and H0255: 1.
HLMGZ09	625638	2611	162 - 302	12363	His-15 to Arg-21.	H0255: 2
HLMGZ33	805813	2612	125 - 232	12364	Gly-13 to Thr-26.	H0255: 2
HLMHD65	799736	2613	3 - 149	12365		H0254: 2, H0255: 2 and L0766: 1.
HLMHG83	799770	2614	68 - 244	12366	Ser-6 to Glu-14.	H0254: 2 and H0255: 1.
HLMHG84	572412	2615	99 - 1	12367		H0255: 6
HLMHH39	823450	2616	1 - 354	12368	Pro-7 to His-14.	H0254: 1 and H0255: 1.
HLMHH40	878117	2617	48 - 338	12369		H0255: 2 and H0271: 1.
HLMHH57	714813	2618	3 - 299	12370	Thr-12 to Pro-17, Arg-24 to Asp-30, Gly-53 to Gly-62.	H0255: 2
HLMHK16	571414	2619	3 - 329	12371		H0255: 2 and L0744: 1.
HLMHK58	799782	2620	208 - 450	12372		H0254: 1 and H0255: 1.
HLMHK61	856848	2621	1 - 255	12373	Ala-23 to Gly-38, Ser-59 to Gly-65.	H0255: 3 and H0254: 1.
HLMHK62	579101	2622	57 - 188	12374	Ala-5 to Pro-11.	H0254: 1 and H0255: 1.
HLMHL60	778481	2623	62 - 187	12375		H0255: 2
HLMHM63	578838	2624	35 - 175	12376		H0254: 1 and H0255: 1.
HLMHN21	516580	2625	141 - 416	12377	Val-17 to Gly-24.	H0063: 2 and H0255: 1.
HLMHN27	856846	2626	2 - 202	12378	Ser-16 to Asn-26.	H0255: 1 and S0053: 1.
HLMHN31	925730	2627	103 - 300	12379		L0766: 3, L0599: 2, H0657: 1, H0656: 1, H0255: 1, H0318: 1, L0779: 1, H0445: 1 and H0422: 1.

HLMHN37	723081	2 - 238	12380		H0255: 2 and H0254: 1.
HLMHN45	668906	1 - 270	12381	Ser-38 to Gly-49.	H0255: 2
HLMHO11	964945	62 - 139	12382	His-17 to Trp-25.	H0254: 1 and H0255: 1.
HLMHO21	799772	17 - 238	12383	Pro-2 to Tyr-11, Pro-13 to Arg-19.	H0254: 2 and H0255: 2.
HLMHO33	799756	116 - 325	12384		H0255: 3 and H0254: 1.
HLMHP67	967636	11 - 355	12385	Ala-6 to Pro-12, Asp-56 to Ser-61.	H0255: 2 and H0254: 1.
HLMHP74	953956	93 - 293	12386	Pro-18 to Val-37, Arg-44 to Gly-51.	H0255: 2
HLMHR25	920711	51 - 311	12387	Ser-1 to Pro-12, Ser-28 to Tyr-38.	H0255: 2
HLMHR55	825530	1 - 216	12388		H0255: 1 and H0264: 1.
HLMHS31	752375	140 - 322	12389		H0255: 2 and H0254: 1.
HLMHS41	574741	3 - 143	12390		H0255: 2
HLMHS66	574742	267 - 404	12391		L0777: 4, H0255: 2, S0114: 1, L0803: 1, L0780: 1 and L0759: 1.
HLMHT67	579048	33 - 149	12392	Ala-12 to Arg-21.	H0255: 2
HLMHT94	531054	156 - 284	12393		H0254: 1 and H0255: 1.
HLMHU80	799723	52 - 294	12394		H0255: 3
HLMHW31	536579	90 - 239	12395	Ser-21 to Val-30.	H0254: 1 and H0255: 1.
HLMHY64	866458	2 - 244	12396	Gly-3 to Lys-8.	AR054: 41, AR051: 38, AR050: 33
	971675	3 - 287	19320		H0305: 3 and H0255: 2.
HLMHZ14	799724	51 - 146	12397	Leu-6 to Pro-24.	H0255: 2 and H0254: 1.
HLMHZ59	530071	2 - 121	12398		H0254: 1 and H0255: 1.
HLMIC94	710391	28 - 234	12399	Thr-23 to Phe-29, Glu-59 to Gly-67.	H0254: 2 and H0255: 1.
HLMIE70	578795	1 - 240	12400	Asn-12 to Arg-21, Gly-54 to Arg-67, Ser-72 to Gly-79.	H0255: 2
HLMIF22	572424	13 - 120	12401		H0254: 1 and H0255: 1.
HLMIG11	967291	2 - 166	12402	Asn-1 to Ser-13.	H0255: 2

HLMIG50	856845	2651	52 - 447	12403	Val-1 to His-14, Arg-16 to Asn-26.	H0255: 2 and L0523: 1.
HLMIG72	799747	2652	201 - 329	12404	Glu-15 to Asp-20.	H0254: 2 and H0255: 1.
HLMIH10	964890	2653	218 - 400	12405		H0255: 3
HLMIH44	883871	2654	178 - 396	12406		H0255: 3 and L0589: 1.
HLMIL62	799713	2655	253 - 414	12407	Gly-31 to Thr-36.	H0255: 3
HLMIM73	576692	2656	19 - 174	12408		H0255: 2, S0218: 1 and H0402: 1.
HLMIO47	531224	2657	34 - 138	12409		H0254: 1 and H0255: 1.
HLMIP23	686670	2658	14 - 391	12410		L0748: 4, H0254: 1, H0255: 1, L0787: 1 and L0741: 1. [17]
HLMIQ11	921009	2659	471 - 785	12411	Ala-34 to Asp-42, Arg-44 to Trp-50, Arg-57 to Arg-64.	L0766: 6, H0402: 3, H0305: 2, H0542: 2, H0254: 1, H0255: 1, H0306: 1, H0581: 1, S0052: 1, L0754: 1, L0749: 1, H0444: 1, H0445: 1 and H0543: 1.
HLMIQ72	715650	2660	39 - 269	12412	Pro-32 to Ser-40.	H0255: 2, H0254: 1 and H0187: 1.
HLMIQ73	764522	2661	229 - 399	12413		H0254: 1 and H0255: 1.
HLMIQ93	576657	2662	1 - 186	12414		H0255: 2
HLMIR23	916938	2663	22 - 357	12415		H0255: 3 and H0254: 1.
HLMIR40	578756	2664	51 - 227	12416	Glu-48 to Gln-53.	H0255: 2
HLMIS03	924651	2665	16 - 192	12417	Ser-14 to Ala-20.	H0254: 2 and H0255: 1.
HLMIS16	572430	2666	131 - 268	12418		H0254: 1 and H0255: 1.
HLMIS64	572509	2667	77 - 193	12419		H0254: 1 and H0255: 1.
HLMIS77	971141	2668	6 - 167	12420		H0255: 2
HLMIS85	578751	2669	165 - 251	12421		H0255: 2
HLMIS89	572506	2670	2 - 163	12422	Pro-45 to Ile-54.	H0254: 1 and H0255: 1.
HLMIT37	799711	2671	233 - 60	12423		H0255: 3
HLMIT43	799705	2672	99 - 308	12424	Gln-2 to Leu-19.	H0254: 2, L0755: 2, H0255: 1 and S0052: 1.
HLMIT76	856860	2673	235 - 372	12425	Arg-2 to Gln-9.	H0255: 2, H0254: 1 and L0748: 1.
HLMIV09	799740	2674	57 - 404	12426	Gln-1 to Cys-12,	H0255: 2 and H0254: 1.

				Amino acid range	H codes
HLMIW07	871698	2675	292 - 122	12427	Gln-27 to Phe-51, Gly-69 to Arg-76.	H0255: 3
HLMIW89	799753	2676	1 - 201	12428	Gly-1 to Gln-7.	H0255: 2 and H0254: 1.
HLMIW90	920464	2677	144 - 323	12429		H0255: 3 and H0254: 1.
HLMIX61	727730	2678	114 - 389	12430	Asp-13 to Gln-18.	S0114: 1, H0255: 1 and L0744: 1.
HLMIX95	960056	2679	59 - 265	12431	Ile-7 to Gln-13, Gln-30 to Asn-35.	H0254: 1, H0255: 1, L0769: 1, L0439: 1 and L0777: 1.
HLMIY56	571401	2680	76 - 252	12432		H0254: 1 and H0255: 1.
HLMIZ02	920426	2681	3 - 203	12433	Arg-1 to Ala-6, Pro-11 to Glu-19, Cys-58 to Pro-64.	H0254: 2 and H0255: 2.
HLMIZ25	825087	2682	1 - 135	12434	His-10 to Trp-21, Met-23 to Ser-29, Gly-36 to Ser-41.	S0212: 1, H0254: 1 and H0255: 1.
HLMIZ40	715586	2683	70 - 255	12435		H0254: 1 and H0255: 1.
HLMJA05	932173	2684	173 - 346	12436	Arg-1 to Pro-6, His-18 to Gly-27.	H0255: 2
HLMJA30	955980	2685	3 - 359	12437	Pro-43 to Trp-52, Ser-56 to Val-62.	H0255: 3
HLMJA66	799731	2686	227 - 355	12438		H0255: 3
HLMJA83	712447	2687	100 - 456	12439	Gly-1 to His-19, Cys-78 to Gln-85.	H0255: 1 and H0063: 1.
HLMJB04	968284	2688	29 - 166	12440		H0255: 2
HLMJB23	578827	2689	3 - 170	12441	Lys-14 to Ser-28, His-41 to Arg-47.	H0255: 2
HLMJB60	924974	2690	102 - 260	12442	Arg-18 to Trp-26.	H0255: 2
HLMJC35	576944	2691	2 - 226	12443	Asn-56 to Arg-67.	H0255: 2
HLMJC76	770177	2692	71 - 286	12444	Arg-11 to Arg-19, Cys-29 to Met-38.	H0255: 1 and H0607: 1.
HLMMA16	576612	2693	91 - 321	12445	Arg-63 to Trp-68, Pro-70 to Leu-75.	H0341: 1 and H0255: 1.
HLMMA52	920292	2694	1 - 384	12446	Gly-1 to Gly-10, His-22 to Ser-34, Gly-39 to Asp-55,	H0657: 1, H0255: 1, H0318: 1 and H0445: 1.

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HLMMA76	799741	2695	82 - 339	12447	His-76 to Gln-94, Pro-96 to Glu-113.	H0255: 3		
HLMMC72	760717	2696	104 - 316	12448	Phe-16 to His-24, Glu-27 to Lys-37, Leu-44 to Asp-55.	H0255: 2		
HLMMD05	932127	2697	97 - 414	12449	Ser-1 to Ser-11.	H0265: 1 and H0255: 1.		
HLMMD26	799743	2698	142 - 258	12450	Thr-13 to Leu-18, Arg-20 to His-25.	H0255: 3		
HLMMD28	959900	2699	17 - 154	12451	Leu-6 to Asn-22.	H0255: 3		
HLMMD89	920442	2700	163 - 2	12452	Lys-1 to Asn-7, Gly-36 to Gln-53.	H0255: 3		
HLMME77	710989	2701	82 - 195	12453		H0255: 1 and H0445: 1.		
HLMMF24	677303	2702	191 - 370	12454		H0255: 1, H0057: 1 and L0750: 1.		
HLMMF82	571403	2703	3 - 275	12455		H0255: 2		
HLMMG02	920427	2704	182 - 364	12456		H0255: 2		
HLMMG23	881361	2705	94 - 345	12457		H0255: 2		
HLMMI18	666575	2706	28 - 222	12458	Tyr-1 to Asp-7.	H0255: 1 and H0264: 1.		
HLMMI86	678672	2707	1 - 222	12459	Pro-16 to Glu-22.	H0255: 2		
HLMMJ08	959630	2708	187 - 417	12460		H0255: 1 and S0052: 1.		
HLMMJ37	577571	2709	91 - 366	12461		H0255: 2		
HLMMK28	577670	2710	14 - 427	12462	Asp-1 to Arg-6, His-8 to His-14, His-33 to Pro-43, Glu-86 to Asp-94.	H0255: 2		
HLMMK39	576167	2711	33 - 188	12463		H0255: 2, L0518: 1 and L0758: 1.		
HLMMN01	657354	2712	3 - 278	12464		H0255: 2 and L0771: 1.		
HLMMN32	576180	2713	3 - 227	12465	Pro-13 to Ser-25, Cys-32 to His-37, Arg-60 to Met-66.	H0255: 2		
HLMMN91	795915	2714	2 - 319	12466		H0255: 2		
HLMMO61	740655	2715	3 - 275	12467	Thr-50 to Pro-55, Ala-60 to Trp-69.	H0255: 2		
HLMMP25	576166	2716	79 - 291	12468		H0255: 2 and L0761: 1.	17q11.2	154275, 162200,

							162200, 182138, 239100, 600881, 601954, 602403
HLMMP68	799715	2717	56 - 364	12469	Arg-38 to Lys-44.	H0255: 3	
HLMMP69	754221	2718	26 - 307	12470		H0255: 2	
HLMMP75	876036	2719	49 - 288	12471	Gln-1 to Met-11.	H0255: 4	
HLMMP88	793125	2720	93 - 470	12472	Cys-45 to Arg-50, Ala-72 to Leu-78.	S0052: 3, H0255: 1 and S0053: 1.	
HLMMR20	799720	2721	158 - 328	12473	Asp-3 to Pro-15.	H0255: 3	
HLMMR39	711503	2722	85 - 234	12474		H0255: 2	
HLMMR45	799771	2723	169 - 447	12475	Thr-9 to Arg-15.	H0255: 5	
HLMMT08	959578	2724	326 - 685	12476		H0255: 1, H0416: 1 and L0749: 1.	
HLMMT22	799737	2725	60 - 233	12477		H0255: 3	
HLMMT72	799719	2726	205 - 336	12478	Pro-19 to Cys-29.	H0255: 3	
HLMMT74	506234	2727	36 - 254	12479	Ala-20 to Gly-28.	H0255: 2	
HLMMT76	578143	2728	141 - 308	12480		H0255: 2	
HLMMU42	424663	2729	33 - 272	12481		H0255: 2, S0426: 1, L0518: 1 and L0748: 1.	
HLMMV25	799718	2730	111 - 317	12482		H0255: 3 and L0749: 1.	
HLMMV63	463919	2731	153 - 530	12483		H0255: 2 and S0052: 1.	
HLMMV65	799706	2732	153 - 329	12484		H0255: 3 and S0053: 1.	
HLMMV66	926188	2733	218 - 448	12485		AR061: 7, AR089: 5 H0255: 2, L0493: 2 and L0662: 1.	
HLMMW06	935621	2734	2 - 145	12486	Gly-8 to Lys-13.	H0255: 2	
HLMMW07	953833	2735	41 - 310	12487	Val-43 to Asp-52, Glu-79 to Asn-84.	H0255: 2	
HLMMW29	577160	2736	63 - 305	12488		H0255: 2	
HLMMW33	702478	2737	30 - 212	12489	Glu-19 to Ser-34.	H0255: 2	
HLMMW37	577153	2738	3 - 347	12490	His-1 to Gly-19, Pro-44 to Gly-51, Pro-65 to Gly-70, Ser-75 to Gly-82.	H0255: 2	
HLMMW44	716797	2739	130 - 291	12491	Ala-33 to Leu-45.	H0255: 2	

Clone ID		SEQ	Range		Description	Notes
HLMMW55	815997	2740	2 - 229	12492		H0255: 2
HLMMW71	761346	2741	2 - 103	12493	Glu-13 to Arg-22.	H0255: 2
HLMMW77	577150	2742	112 - 273	12494	Pro-10 to Gly-20, Glu-23 to Arg-30.	H0255: 2
HLMMX19	861317	2743	574 - 362	12495	Trp-1 to Gln-7, Pro-10 to Gly-17.	H0255: 2 and S0426: 1.
HLMMX57	734985	2744	123 - 293	12496	Glu-10 to Gly-25, Ser-44 to Leu-56.	H0255: 2
HLMMX72	760651	2745	1 - 234	12497	Gly-1 to Pro-7.	H0255: 2
HLMMX73	764455	2746	2 - 250	12498	Ala-1 to Ser-8, Met-23 to His-30.	H0255: 2
HLMMX85	783429	2747	90 - 206	12499	Thr-1 to Leu-10, Thr-33 to Lys-39.	H0255: 2
HLMMY01	916636	2748	261 - 557	12500		H0255: 3 and L0774: 1.
HLMMY03	924511	2749	107 - 355	12501	Leu-10 to Asn-25, Pro-36 to Asp-55.	H0255: 2
HLMMZ13	856802	2750	250 - 432	12502	Gln-25 to Ser-33.	H0255: 2
HLMMZ16	927659	2751	3 - 155	12503	Arg-27 to Asn-42.	H0255: 2 and H0341: 1.
HLMNA14	918207	2752	159 - 692	12504		L0595: 3, L0769: 2, L0779: 2, H0556: 1, H0255: 1, L0794: 1 and L0783: 1.
HLMNA84	577572	2753	131 - 343	12505	Pro-44 to Gly-49.	L0777: 4 and H0255: 2.
HLMNA88	856809	2754	106 - 306	12506	Leu-56 to Ala-64.	H0255: 2
HLMNA91	765862	2755	75 - 386	12507	Arg-11 to Gly-20, Cys-22 to Val-34, Ala-57 to Lys-62, Val-64 to Pro-79.	H0255: 2 [3]
HLMNB08	959559	2756	2 - 361	12508	Ala-3 to Glu-8.	H0255: 2
HLMNB94	575838	2757	67 - 186	12509		H0255: 2
HLMNE84	760695	2758	34 - 222	12510		H0255: 2
HLMNG08	876147	2759	164 - 508	12511	Ala-42 to Gly-48, Ala-50 to Met-60, Gln-80 to Glu-91.	L0599: 4, H0255: 1, H0318: 1, L0761: 1, L0655: 1, L0517: 1 and H0543: 1.
HLMNG68	921008	2760	120 - 263	12512		H0255: 1 and H0445: 1.
HLMNH23	787043	2761	168 - 422	12513		H0255: 2
HLMNH25	575921	2762	183 - 407	12514	Trp-26 to Trp-32.	H0255: 2, L0748: 1 and

HLMNI37	920361	2763	38 - 253	12515	Lys-2 to Gly-10.	L0745: 1.
HLMNI69	531356	2764	1 - 180	12516		H0255: 2
HLMNL01	835623	2765	112 - 270	12517	Val-36 to Tyr-43.	H0255: 2
HLMNL06	935626	2766	7 - 177	12518	Pro-27 to Ile-35.	H0255: 2, L0060: 1 and L0766: 1.
HLMNL08	839948	2767	2 - 205	12519		H0255: 2
HLMNL23	675970	2768	147 - 335	12520	Lys-1 to Arg-6, Arg-25 to Leu-35, Lys-41 to Leu-46.	H0255: 2
HLMNL55	964739	2769	135 - 281	12521	Arg-23 to Ser-28.	H0255: 2
HLMNL57	575900	2770	3 - 104	12522		H0255: 2
HLMNL64	578627	2771	74 - 271	12523		H0255: 2
HLMNM19	668746	2772	238 - 441	12524	Tyr-4 to His-9.	H0255: 2
HLMNM39	577649	2773	1 - 213	12525		H0255: 2
HLMNM44	577106	2774	72 - 197	12526		H0255: 1, H0306: 1 and L0369: 1.
HLMNM61	575889	2775	200 - 355	12527	Gln-8 to His-15, Gly-30 to Lys-36, Ser-41 to Lys-49.	H0255: 2
HLMNN02	920296	2776	2 - 400	12528		H0255: 2
HLMNO52	968377	2777	253 - 456	12529	Lys-36 to Arg-41.	H0255: 2, L0809: 2, L0766: 1 and L0599: 1.
HLMNQ35	575906	2778	14 - 217	12530	Gln-20 to Gln-25.	H0255: 3
HLMNT27	752366	2779	93 - 272	12531	His-1 to Ser-8, Arg-24 to Ser-30.	H0255: 3
HLMNT62	745733	2780	191 - 253	12532	Pro-11 to Gly-21.	H0255: 2
HLMNU73	577693	2781	1 - 390	12533	Gly-1 to Leu-15, Pro-23 to Asp-35, Leu-55 to Arg-63.	H0255: 2, H0305: 2 and H0556: 1.
HLMNW94	577157	2782	3 - 251	12534	Arg-35 to Ser-42.	H0255: 2
HLMNW96	799745	2783	3 - 290	12535		H0255: 3
HLMNX15	660316	2784	2 - 166	12536		H0255: 2
HLMNX33	702477	2785	180 - 404	12537	Ala-22 to Pro-28.	H0255: 2
HLMNX74	765800	2786	147 - 260	12538	Glu-10 to Leu-15.	H0255: 2

HLNSF63	509519	2787	184 - 351	12539		H0108: 2
HLNSG27	684650	2788	100 - 252	12540	Pro-4 to Ala-9, Glu-33 to Ala-51.	L0748: 5, L0751: 2, H0486: 12 1, H0108: 1, H0318: 1, L0790: 1 and L0594: 1.
HLTAA66	503025	2789	18 - 308	12541	Ser-13 to Ser-18.	H0090: 2
HLTAA94	503019	2790	135 - 275	12542	Gln-12 to Thr-17.	H0090: 2
HLTAI12	971523	2791	173 - 487	12543	Arg-71 to Val-79.	L0777: 5, H0090: 2, L0743: 2, L0803: 1, L0774: 1, L0784: 1, L0742: 1, L0747: 1, L0749: 1, L0756: 1 and L0779: 1.
HLTAI56	960750	2792	42 - 188	12544		H0090: 2
HLTAL59	508603	2793	3 - 83	12545	Lys-17 to Pro-24.	H0090: 2
HLTAR67	578467	2794	3 - 200	12546	Pro-39 to Gly-50.	H0416: 1 and H0090: 1.
HLTAR90	524360	2795	3 - 182	12547	Pro-3 to Leu-17, Gln-31 to Lys-42.	H0090: 3
HLTAT22	508592	2796	170 - 328	12548	Lys-32 to Ser-37.	H0090: 2
HLTAT93	575133	2797	192 - 323	12549	Lys-19 to Gly-24.	H0090: 2
HLTAU67	703103	2798	1 - 234	12550		H0090: 2
HLTAW36	536674	2799	121 - 294	12551	Leu-1 to Phe-9.	H0090: 2
HLTAW69	753707	2800	1 - 516	12552	Glu-16 to Leu-25, Tyr-36 to Asn-41, Ser-51 to Lys-56, Ser-59 to Ser-72, Val-104 to Thr-129, Arg-139 to Asn-151.	H0090: 1 and H0423: 1.
HLTBL46	508925	2801	127 - 321	12553		S0114: 1 and H0090: 1.
HLTBN29	703295	2802	2 - 253	12554	Glu-21 to Arg-26, Glu-28 to Thr-35.	H0421: 1 and H0090: 1.
HLTBO49	839804	2803	48 - 260	12555	Leu-11 to Leu-17.	L0005: 4 and H0090: 2.
HLTBU04	928005	2804	209 - 403	12556	Asp-36 to Ser-43.	H0090: 3
HLTBW51	522881	2805	10 - 171	12557		H0090: 2
HLTBX34	856609	2806	1 - 168	12558	Leu-25 to Ser-32.	H0583: 1 and H0090: 1.
HLTCL66	417344	2807	2 - 265	12559	Ser-6 to Leu-16.	H0090: 1 and H0522: 1.
HLTCM12	888630	2808	30 - 248	12560	Pro-13 to Met-18.	AR054: 1, AR050: 0 H0090: 4

Clone	No.	SEQ ID	Range	Region	H codes	Other
HLTCQ51	725845	2809	105 - 314	Ile-4 to Pro-14, Glu-18 to Trp-31, Gly-53 to Val-60.	H0090: 1 and H0488: 1.	
HLTCR55	839556	2810	56 - 244		L0748: 7, H0090: 2, H0264: 1, S0052: 1, L0749: 1 and H0445: 1.	
HLTCT75	766511	2811	72 - 230		L0731: 2, H0611: 1, H0090: 1, L0659: 1, L0666: 1, L0752: 1 and H0543: 1.	
HLTCU58	625309	2812	11 - 211	Lys-21 to Glu-26.	H0090: 3	
HLTCV43	715525	2813	81 - 368	Glu-1 to Ser-17, Ala-19 to Ser-27.	H0090: 3	
HLTCV57	535289	2814	1 - 198		H0090: 2	
HLTCV63	574712	2815	2 - 103		H0090: 2	
HLTCZ25	574704	2816	20 - 124	Lys-6 to Tyr-15.	H0090: 3, S0212: 2, H0063: 1 2, H0488: 1, L0789: 1 and S0428: 1.	
HLTCZ37	574705	2817	1 - 183		H0090: 2	
HLTDC32	574699	2818	1 - 288	Gly-2 to Pro-10.	H0271: 1 and H0090: 1.	
HLTDC80	574698	2819	194 - 367	Ser-12 to Ala-23.	H0271: 1 and H0090: 1.	
HLTDD44	522698	2820	59 - 115		H0090: 2	
HLTDD62	571328	2821	14 - 259		H0090: 2	
HLTDE78	856603	2822	2 - 157		H0090: 2	
HLTDK54	574714	2823	117 - 290		H0090: 2	
HLTDK64	772378	2824	3 - 149	Ser-30 to Asn-36.	H0543: 2, H0556: 1, H0341:5q35 1, H0090: 1, H0591: 1, L0766: 1 and L0758: 1.	123101, 164040, 208100, 246530
HLTDL71	508932	2825	3 - 200	Glu-14 to Phe-22, Val-58 to Gln-64.	H0090: 2	
HLTDT14	973100	2826	34 - 255		H0179: 1 and H0090: 1.	
HLTDY57	934619	2827	160 - 513		H0611: 1, H0069: 1, H0090: 1 and H0264: 1.	
HLTEA13	971722	2828	559 - 681		H0179: 2, H0090: 1 and H0445: 1.	
HLTEE40	711453	2829	160 - 2		H0083: 1 and H0090: 1.	
HLTEF24	871203	2830	3 - 149	Gln-26 to Gln-33.	H0090: 2	

HLTEI47	720474	2831	469 - 597		H0580: 1 and H0090: 1.
HLTEI53	723405	2832	1 - 231		S0114: 1, H0614: 1 and H0090: 1.
HLTEK94	793033	2833	83 - 361		H0090: 2
HLTEL11	967529	2834	38 - 127	Asn-14 to Ile-22, Ser-24 to Phe-30.	H0341: 2 and H0090: 1.
HLTEL25	508607	2835	2 - 124		H0090: 2
HLTEL59	851867	2836	378 - 575	Arg-16 to Asn-22, Arg-29 to Glu-35.	H0090: 2 and L0748: 1.
HLTEO88	955228	2837	133 - 270		H0090: 2
HLTESS0	958906	2838	67 - 255	Arg-8 to Asn-14.	L0766: 4, L0779: 2, H0486: 1, H0090: 1, L0520: 1, L0761: 1, L0666: 1, L0438: 1 and L0745: 1.
HLTES59	739412	2839	112 - 273		H0250: 1 and H0090: 1.
HLTEX10	968060	2840	116 - 247	Gly-11 to Ser-19.	H0090: 2
HLTEX38	573353	2841	84 - 206	Arg-28 to Gln-36.	H0090: 2
HLTEZ24	572779	2842	237 - 470		H0090: 2 and H0063: 1.
HLTEZ33	574634	2843	95 - 244	Cys-13 to Arg-20.	H0090: 2
HLTFA05	932221	2844	185 - 334		H0581: 1 and H0090: 1.
HLTFA34	703403	2845	2 - 109		H0580: 1, H0090: 1 and L0803: 1.
HLTGF04	927449	2846	533 - 784	Pro-78 to Lys-84.	L0439: 3, S0426: 2, L0766: 2, H0657: 1, H0591: 1, S0002: 1, L0772: 1, L0775: 1, L0438: 1, H0521: 1, L0748: 1 and L0758: 1.
HLTGF55	669071	2847	180 - 19	Glu-1 to Asn-6, Phe-27 to Lys-33, Pro-43 to Gly-51.	H0591: 2
HLTGG25	677696	2848	65 - 310	Asn-1 to Asn-6, Pro-9 to Ser-16.	H0591: 2
HLTGG61	741529	2849	25 - 186	Glu-21 to Trp-27.	H0591: 2
HLTGM60	973438	2850	253 - 468	Asn-10 to Cys-15, Lys-35 to Gly-44.	H0591: 17
HLTGP51	725140	2851	32 - 163	Ser-17 to Ala-22.	H0591: 2

HLTGP63	744700	2852	238 - 80	12604	Ile-38 to Ile-43.	H0318: 1 and H0591: 1.
HLTGS44	716323	2853	132 - 251	12605		H0591: 1, L0748: 1 and H0423: 1.
HLTGV54	729247	2854	2 - 136	12606	Gln-14 to His-19.	H0591: 2
HLTGV64	665647	2855	228 - 413	12607	Gln-28 to Asn-34.	H0591: 4 and L0758: 1.
HLTGV67	747584	2856	293 - 430	12608		H0591: 3
HLTGX26	681233	2857	165 - 311	12609		H0591: 2
HLTGY75	767060	2858	113 - 343	12610		H0090: 1 and H0591: 1.
HLTHC34	702078	2859	1 - 159	12611	Leu-28 to Asn-34.	H0591: 3
HLTHH89	974112	2860	43 - 249	12612		H0591: 3
HLTHI11	966435	2861	412 - 597	12613		H0591: 3, H0581: 1 and H0444: 1.
HLTHJ35	707245	2862	379 - 543	12614		L0766: 2, H0581: 1, H0591: 1, H0576: 1 and L0748: 1.
HLTHJ68	719927	2863	160 - 294	12615		S0218: 1 and H0591: 1.
HLTHO15	969356	2864	2 - 205	12616		H0591: 2
HLTHO31	697550	2865	2 - 196	12617		H0591: 2
HLTHO46	923482	2866	157 - 273	12618		H0591: 2
HLTHS75	965126	2867	103 - 381	12619	Thr-79 to Leu-85.	H0591: 1 and H0423: 1.
HLTHV83	780482	2868	670 - 837	12620		H0591: 1 and H0444: 1.
HLTIJ72	968986	2869	54 - 296	12621		H0591: 2
HLYAA21	671074	2870	428 - 715	12622	Pro-2 to Lys-19, Glu-24 to Pro-42, Pro-71 to Gln-78, Gly-89 to Lys-96.	L0731: 2, H0402: 1 and H0445: 1.
HLYAA41	909874	2871	3 - 386	12623	Asp-1 to Ser-7, Pro-10 to Cys-18, Glu-36 to Ala-54, Tyr-83 to Pro-91, Pro-108 to Gly-115.	AR089: 1, AR061: 1 H0445: 4, L0761: 2, H0421: 1, S0002: 1 and L0788: 1.
HLYAA44	964841	2872	62 - 298	12624	Asp-19 to Arg-30, Lys-73 to Ala-78.	H0445: 5 and L0748: 1.
HLYAB02	920407	2873	171 - 332	12625	Asn-1 to Pro-6.	S0114: 1 and H0445: 1.
HLYAB38	861161	2874	3 - 215	12626	Phe-45 to Tyr-50.	S0212: 3 and H0445: 1.
HLYAC38	668989	2875	1 - 273	12627		H0445: 2

HLYAD10	964845	2876	350 - 550	12628	Lys-1 to Lys-8, Thr-29 to Ser-36.	H0445: 2		
HLYAE50	576449	2877	313 - 471	12629	Gly-30 to Pro-53.	H0402: 1 and H0445: 1.		
HLYAF20	668872	2878	454 - 663	12630		L0766: 8, L0748: 4, L0756: 2, L0777: 2, L0604: 2, L0157: 1, H0591: 1, L0750: 1, L0779: 1, H0445: 1 and H0543: 1.		
HLYAF28	975007	2879	269 - 424	12631	Lys-11 to Tyr-17.	H0445: 2		
HLYAG42	691747	2880	45 - 152	12632		H0445: 2 and S0428: 1.		
HLYAH26	855981	2881	3 - 419	12633		H0444: 1 and H0445: 1.	14q32.1	107280, 107280, 107400, 107400, 122500, 186960, 245200, 601841
HLYAK12	970807	2882	143 - 295	12634		H0445: 2		
HLYAL83	780075	2883	303 - 482	12635	Lys-1 to Ala-7, Ser-25 to Glu-39, Thr-44 to Gly-53.	S0052: 1 and H0445: 1.		
HLYAO31	698104	2884	125 - 271	12636	Pro-10 to Gln-15, Ser-30 to Arg-37, Gly-43 to Cys-49.	H0445: 2, L0002: 1 and L0594: 1.		
HLYAO67	924042	2885	96 - 314	12637	Asn-22 to Leu-35, Phe-43 to Ala-59.	H0305: 2, L0731: 1 and H0445: 1.		
HLYAP10	964748	2886	288 - 431	12638	Gly-28 to Lys-47.	S0052: 1 and H0445: 1.		
HLYAP26	681892	2887	195 - 362	12639		H0580: 1 and H0445: 1.		
HLYAQ80	868396	2888	319 - 564	12640	Pro-39 to Lys-58.	H0581: 1 and H0445: 1.		
HLYAT56	935552	2889	1 - 213	12641		H0421: 1, S0052: 1 and H0445: 1.		
HLYAU29	576596	2890	3 - 251	12642		H0402: 1, L0745: 1 and H0445: 1.		
HLYAV80	689969	2891	3 - 221	12643	Asp-1 to Ser-16.	H0445: 3		
HLYAW35	780987	2892	261 - 386	12644		H0580: 1 and H0445: 1.		
HLYAX61	707248	2893	184 - 333	12645		H0445: 2		
HLYAX85	575868	2894	2 - 391	12646		H0402: 1, L0761: 1, H0436: 1 and H0445: 1.		
HLYAY62	825513	2895	93 - 350	12647		H0445: 2		

HLYBAY65	575863	2896	1 - 237		H0445: 2
HLYBA01	916635	2897	341 - 478		H0445: 2
HLYBA42	871648	2898	497 - 664	Ser-38 to Arg-56.	H0445: 2 and L0605: 1.
HLYBA72	717644	2899	178 - 351		H0445: 2
HLYBA85	575878	2900	2 - 280	Arg-1 to Thr-9, Lys-64 to Lys-80.	H0445: 2
HLYBA96	575834	2901	1 - 123	Ser-21 to Glu-29.	H0445: 2
HLYBB50	708624	2902	158 - 3\3	Met-11 to Gln-19.	H0445: 2
HLYBB65	866883	2903	331 - 477	Glu-38 to Arg-43.	S0114: 1 and H0445: 1.
HLYBD46	575865	2904	2 - 133	Pro-1 to Cys-6, Ser-37 to Thr-44.	H0445: 2
HLYBF47	706517	2905	259 - 420	Arg-28 to Asn-33.	H0305: 1, L0766: 1, L0517: 1 and H0445: 1.
HLYBF75	828077	2906	197 - 442	Pro-27 to Phe-35.	L0758: 3, H0264: 2, L0779: 1 and H0445: 1.
HLYBG18	575872	2907	335 - 478	Lys-11 to Leu-20.	H0445: 2
HLYBH08	856445	2908	104 - 271		L0749: 2, S0114: 1 and H0445: 1.
HLYBH56	733472	2909	161 - 406	Ser-17 to Tyr-31, Asn-70 to His-82.	H0445: 2
HLYBH91	576793	2910	329 - 478		H0090: 1 and H0445: 1.
HLYBI44	728035	2911	2 - 259	Arg-4 to Ala-10, Val-12 to Gly-21.	H0423: 2 and H0445: 1.
HLYBJ10	964752	2912	195 - 455	Gly-10 to Arg-25.	H0445: 2
HLYBJ42	713845	2913	121 - 252		H0445: 3 and L0766: 1.
HLYBL92	856419	2914	389 - 592		H0445: 3, H0255: 2, L0749: 2, H0556: 1, H0402: 1, H0108: 1, H0090: 1, H0436: 1, H0444: 1 and S0196: 1.
HLYBM35	625408	2915	81 - 302	Thr-28 to Lys-36, Arg-43 to Glu-48.	H0445: 2
HLYBM75	757084	2916	138 - 278	Gln-6 to Arg-12, Arg-17 to Arg-25, Asn-30 to Asp-44.	H0445: 2
HLYBN94	670500	2917	207 - 353		H0445: 2
HLYBO53	721377	2918	140 - 262	Lys-12 to Gly-27,	H0445: 4

HLYBR03	924515	2919	203 - 397	12671	Trp-31 to Ile-38.	H0402: 1 and H0445: 1.
HLYBR41	712389	2920	334 - 510	12672	Gln-1 to His-13.	H0445: 3
HLYBR83	750318	2921	1 - 255	12673	Ala-6 to Ser-11, Gly-19 to His-27.	L0805: 2, H0445: 2, L0766: 1, L0803: 1, L0438: 1 and H0436: 1.
HLYBS12	970795	2922	455 - 646	12674		S0212: 2, L0143: 1, H0202: 1 and H0445: 1.
HLYBT19	668744	2923	2 - 250	12675		L0749: 2, H0457: 1, L0748: 1 and H0445: 1.
HLYBT64	527687	2924	67 - 225	12676		H0305: 2, L0809: 1, L0720: 1 and H0445: 1.
HLYBT69	678175	2925	132 - 383	12677	Tyr-22 to Ser-31.	H0487: 1, H0521: 1 and H0445: 1.
HLYBT84	575828	2926	1 - 57	12678	Ser-8 to Asn-19.	H0445: 2
HLYBU28	914702	2927	38 - 196	12679		L0748: 2, H0445: 1 and H0543: 1.
HLYBU52	727213	2928	121 - 267	12680	Ser-8 to Glu-14.	S0053: 1 and H0445: 1.
HLYBV42	713837	2929	3 - 209	12681		H0445: 2, L0803: 1, L0789: 1 and L0753: 1.
HLYBW12	970796	2930	1 - 231	12682	Asp-22 to Val-28, Thr-56 to Ser-66, Pro-72 to Phe-77.	H0264: 1 and H0445: 1.
HLYBW35	812692	2931	137 - 340	12683	Arg-5 to Phe-13, Ser-18 to Leu-23, Pro-32 to Ser-40.	S0052: 2, H0318: 1, S0428: 1 and H0445: 1.
HLYBX77	721086	2932	113 - 220	12684		S0114: 1 and H0445: 1.
HLYBX84	754842	2933	355 - 552	12685	Gly-11 to Gln-18.	H0445: 2
HLYBZ17	577479	2934	127 - 387	12686	Ser-1 to Leu-7, Lys-60 to Gly-71.	H0457: 2, H0486: 1, H0264: 1, L0768: 1, L0666: 1, H0436: 1, L0754: 1, H0445: 1 and H0542: 1.
HLYBZ23	856430	2935	20 - 310	12687	Ser-6 to Ser-13.	H0445: 2 and H0422: 1.
HLYBZ60	682675	2936	82 - 192	12688	Asp-10 to His-19.	S0218: 1 and H0445: 1.
HLYBZ86	856436	2937	306 - 536	12689	Glu-37 to Lys-52.	H0445: 2, L0439: 1 and L0758: 1.

HLYCA76	770107	2938	88 - 342	12690	Gln-1 to His-6, Glu-42 to Glu-51, Thr-58 to Glu-66.	S0116: 1 and H0445: 1.
HLYCA77	677758	2939	595 - 753	12691		H0445: 3
HLYCC39	710843	2940	458 - 577	12692		H0445: 2, H0521: 1 and L0748: 1.
HLYCC65	932727	2941	1 - 144	12693	Thr-21 to His-26.	H0445: 2
HLYCF12	908532	2942	68 - 268	12694	Ser-5 to Ser-12.	H0087: 1 and H0445: 1.
HLYCF46	718930	2943	82 - 234	12695	Arg-1 to Glu-6.	H0445: 1 and H0423: 1.
HLYCF70	741417	2944	1 - 111	12696	Thr-15 to Gln-22.	S0218: 1 and H0445: 1.
HLYCH10	964354	2945	236 - 382	12697	Ser-3 to Gly-10, Ala-14 to Phe-19.	H0635: 1 and H0445: 1.
HLYCH15	964840	2946	85 - 186	12698		H0445: 5 and L0748: 1.
HLYCM68	658540	2947	2 - 226	12699		H0445: 1 and H0422: 1.
HLYCM88	732392	2948	247 - 378	12700		H0264: 1 and H0445: 1.
HLYCN75	761510	2949	342 - 482	12701	Gly-6 to Thr-16.	S0114: 1 and H0445: 1.
HLYCO31	697787	2950	17 - 163	12702	Ser-17 to Ser-22.	S0052: 1 and H0445: 1.
HLYCO66	785990	2951	2 - 139	12703	Gln-5 to Asn-14, Pro-17 to Lys-22.	H0265: 1 and H0445: 1.
HLYCO68	729293	2952	2 - 130	12704		H0445: 2
HLYCP66	706435	2953	167 - 367	12705	Arg-61 to Cys-67.	L0766: 2, L0603: 2, H0306: 1, L0307: 1 and H0445: 1.
HLYCQ53	728046	2954	63 - 314	12706	Asn-5 to Arg-11, Arg-25 to Trp-30, Thr-38 to Gly-48, Cys-66 to Lys-72, Gln-79 to Ser-84.	S0053: 1 and H0445: 1.
HLYCQ68	752887	2955	3 - 140	12707	Gly-12 to Ala-18.	S0218: 1 and H0445: 1.
HLYCR47	850147	2956	2 - 241	12708		H0306: 2, S0053: 2, H0445: 2, H0057: 1, H0179: 1, L0667: 1 and S0428: 1.
HLYCS15	660006	2957	3 - 149	12709	Arg-44 to His-49.	H0445: 2
HLYCV49	718840	2958	137 - 307	12710		H0318: 1 and H0445: 1.
HLYCW04	615021	2959	3 - 344	12711	His-1 to Gly-6, Glu-18 to Glu-24.	H0444: 1 and H0445: 1.
HLYCW13	656827	2960	1 - 192	12712		H0445: 2

HLYCW20	669541	113 - 346	12713	Ser-24 to Gln-29.	S0002: 1 and H0445: 1.
HLYCW62	856443	625 - 843	12714		H0445: 5, H0422: 2, H0271: 1 and L0387: 1.
HLYCY30	650859	3 - 143	12715	Glu-6 to Asn-21.	H0402: 1, S0053: 1 and H0445: 1.
HLYCZ63	744886	82 - 243	12716		H0591: 1 and H0445: 1.
HLYDB85	784253	105 - 281	12717		H0445: 2
HLYDC02	919586	564 - 743	12718		H0657: 1 and H0445: 1.
HLYDC77	772022	120 - 266	12719	Arg-1 to Gln-8.	H0445: 2
HLYDD13	657010	350 - 466	12720	Lys-25 to Leu-33.	H0445: 2
HLYDG06	935149	1 - 183	12721	Tyr-14 to Gln-19, Asp-53 to Gly-61.	H0445: 2 and L0606: 1.
HLYDG21	856413	371 - 550	12722		H0087: 1 and H0445: 1.
HLYDG27	682910	173 - 391	12723	Pro-26 to Trp-32, Glu-36 to Cys-43, Pro-46 to Ile-54.	H0264: 1 and H0445: 1.
HLYDG38	597131	174 - 299	12724	Ile-7 to Arg-24, Gln-33 to Lys-42.	H0445: 2, S0216: 1 and L0748: 1.
HLYDG59	871587	218 - 451	12725	Arg-1 to Phe-8.	H0486: 1 and H0445: 1.
HLYDH27	678266	1 - 189	12726	Leu-20 to Trp-26.	L0517: 2, L0748: 2, H0318: 1, H0581: 1, L0761: 1, L0766: 1 and H0445: 1.
HLYDH32	699082	102 - 245	12727	Lys-36 to Lys-42.	H0445: 2 and L0766: 1.
HLYDH52	726575	373 - 540	12728	Leu-1 to Lys-8, Lys-19 to Pro-30.	H0445: 2
HLYDJ08	959055	282 - 527	12729		H0057: 1, L0663: 1 and H0445: 1.
HLYDK74	738346	124 - 375	12730		H0265: 1 and H0445: 1.
HLYDL24	677041	71 - 319	12731		L0748: 2, L0608: 2, H0635: 1, L0655: 1 and H0445: 1.
HLYDL60	909866	3 - 392	12732	Ala-4 to Cys-11, Cys-15 to Arg-20, Pro-29 to Leu-35.	H0656: 1, H0457: 1 and H0445: 1.
HLYDL75	790244	88 - 258	12733		H0445: 2
HLYDM51	973377	201 - 431	12734	Asp-18 to Arg-38.	H0306: 2 and H0445: 1.
HLYDM62	743380	105 - 287	12735		S0053: 1 and H0445: 1.

HLYDO56	733240	2984	234 - 70	12736		H0402: 1 and H0445: 1.
HLYDO75	767170	2985	72 - 359	12737	Lys-3 to Arg-8, Met-50 to Lys-68, Lys-90 to Asn-95.	H0445: 2 and L0747: 1.
HLYDS11	966732	2986	111 - 302	12738	Arg-17 to Ser-23.	L0748: 1, L0749: 1, H0444: 1 and H0445: 1.
HLYDS66	711565	2987	324 - 506	12739		S0114: 1, H0318: 1 and H0445: 1.
HLYDS84	687991	2988	175 - 360	12740	Pro-9 to Val-34.	H0255: 1, H0402: 1 and H0445: 1.
HLYDS91	775483	2989	221 - 379	12741	Asp-1 to Tyr-11.	H0543: 2 and H0445: 1.
HLYDT03	920268	2990	88 - 222	12742		H0305: 2, H0402: 1, L0521: 1 and H0445: 1.
HLYDT68	526245	2991	8 - 187	12743	Ile-3 to Thr-11.	H0222: 1, H0264: 1 and H0445: 1.
HLYDU08	959074	2992	87 - 254	12744		H0445: 2
HLYDV62	927872	2993	2 - 430	12745	Pro-19 to Cys-27, Glu-45 to Ala-63, Asp-96 to Pro-102, Pro-117 to Gly-124, Pro-132 to Ser-143.	AR051: 24, AR054: 20, AR050: 20, AR061: 1, AR089: 1 H0445: 4, L0761: 2, H0421: 1, S0002: 1 and L0788: 1.
HLYDX93	669792	2994	72 - 278	12746	Lys-19 to Leu-27, Gly-50 to Pro-55.	S0134: 1 and H0445: 1.
HLYDZ44	716435	2995	137 - 370	12747	Phe-6 to Asn-12.	H0637: 1, L0439: 1 and H0445: 1.
HLYEB56	710819	2996	1 - 138	12748		H0445: 2, L0659: 1 and L0599: 1.
HLYED52	931992	2997	36 - 209	12749	Lys-26 to Asp-39.	H0445: 1 and H0543: 1.
HLYED59	856383	2998	6 - 476	12750	Gln-11 to Val-16, Pro-35 to Lys-41.	L0757: 2, H0445: 2 and L0586: 1.
HLYED65	747763	2999	111 - 227	12751	Tyr-12 to Thr-18, Ser-26 to Lys-37.	H0445: 2
HLYED77	615312	3000	53 - 406	12752	Arg-18 to Gly-28, Pro-33 to Gly-41.	S0053: 1 and H0445: 1.
HLYED85	784254	3001	199 - 501	12753	Ser-13 to Arg-21, Arg-64 to Thr-71.	H0521: 2, H0402: 1 and H0445: 1.

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HLYEE34	703906	3002	410 - 541	Lys-36 to Phe-44.	H0445: 2 and L0526: 1.
HLYEJ81	488925	3003	38 - 307	Lys-38 to Ser-47, Val-51 to Gly-71, Lys-80 to Lys-85.	S0114: 1, H0521: 1 and H0445: 1.
HLYEL47	666448	3004	182 - 445	Asn-12 to Leu-19, Pro-37 to Phe-48.	S0114: 1 and H0445: 1.
HLYEN93	682176	3005	338 - 490	Asn-3 to Asp-11, Lys-27 to Asn-32.	H0318: 1 and H0445: 1.
HLYEQ40	710986	3006	37 - 156		H0402: 1, S0426: 1, S0428: 1 and H0445: 1.
HLYEQ73	760566	3007	2 - 214		S0114: 1 and H0445: 1.
HLYER38	709181	3008	115 - 282	Leu-2 to Ser-11, Lys-38 to Ala-46.	H0444: 1 and H0445: 1.
HLYET03	923834	3009	161 - 274	Tyr-1 to Phe-6.	H0445: 2
HLYFA27	682763	3010	281 - 469	Val-6 to Pro-12.	S0426: 1, H0445: 1 and L0362: 1.
HLYFA58	835409	3011	68 - 328	Gln-10 to Trp-15.	H0552: 4, L0761: 3, H0583: 2, H0556: 1, H0650: 1, L0785: 1, S0002: 1, L0655: 1, H0445: 1 and H0543: 1.
HLYFC15	923620	3012	3 - 221		H0580: 1 and H0445: 1.
HLYFF10	964109	3013	265 - 576		H0318: 2 and H0445: 2.
HLYFF64	746339	3014	3 - 191	Phe-30 to Ser-42.	H0445: 2
HLYFI64	924558	3015	174 - 311	Ser-13 to Ser-22.	L0770: 1, L0766: 1, H0445: 1 and H0423: 1.
HLYFK47	953988	3016	260 - 436	Gly-32 to His-49.	H0318: 1 and H0445: 1.
HLYFO83	863918	3017	16 - 276	Ala-38 to Gln-48.	H0421: 1 and H0445: 1.
HLYFP23	675373	3018	261 - 476		H0445: 2
HLYFR38	709184	3019	99 - 1	Lys-28 to Gly-33.	H0445: 2
HLYFU64	936051	3020	255 - 422	Gly-11 to Gly-32.	S0114: 1 and H0445: 1.
HLYFX27	682776	3021	73 - 180	Gln-27 to Arg-36.	H0445: 2
HLYFX40	710851	3022	176 - 424	Gly-55 to Gln-61.	H0370: 1, L0756: 1 and H0445: 1.
HLYFX96	916452	3023	95 - 244	Arg-5 to Lys-13, Pro-28 to Met-34.	H0445: 2
HLYFY33	719251	3024	96 - 314		T0002: 1, L0526: 1, L0758:

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HLYFY78	660000	3025	157 - 408		1 and H0445: 1.
HLYGA32	698860	3026	97 - 249		H0521: 1 and H0445: 1. S0116: 1, S0428: 1 and H0445: 1.
HLYGA46	952292	3027	482 - 766	Phe-28 to Lys-36.	H0445: 2, H0556: 1 and S0053: 1.
HLYGC11	966480	3028	3 - 125		S0114: 1 and H0445: 1.
HLYGC18	665721	3029	10 - 366	Thr-6 to Lys-33, Leu-47 to Lys-57, Phe-67 to Glu-83, Tyr-91 to Leu-97, Leu-105 to Ala-110.	L0777: 2, H0445: 2 and L0731: 1.
HLYGC63	744739	3030	3 - 200	Thr-12 to Glu-26, Ser-57 to Gln-66.	H0556: 1, H0069: 1, H0635: 1 and H0445: 1.
HLYGE28	686173	3031	184 - 318	Lys-1 to Lys-11, Ser-22 to His-28.	H0444: 1 and H0445: 1.
HLYGH53	871636	3032	233 - 406		S0212: 1, L0766: 1, L0779: 1 and H0445: 1.
HLYGI23	656698	3033	154 - 258	Glu-10 to Ser-15.	H0445: 2
HLYGK24	676907	3034	39 - 122		L0766: 2, H0402: 1, L0779: 1 and H0445: 1.
HLYGK77	732362	3035	49 - 201	Lys-22 to Lys-31.	H0445: 2 and H0250: 1.
HLYGK82	698553	3036	127 - 294	Gln-43 to Leu-49.	H0445: 1 and H0543: 1.
HLYGK96	967628	3037	245 - 412		S0114: 1 and H0445: 1.
HLYGM41	712099	3038	197 - 310	Glu-2 to Thr-12, Lys-20 to Leu-32.	H0264: 1 and H0445: 1.
HLYGM53	690748	3039	234 - 563	Ile-18 to Trp-24.	H0445: 2 and L0362: 1.
HLYGP15	920077	3040	11 - 229	Thr-7 to Trp-14, Arg-17 to Ser-33.	H0271: 1 and H0445: 1.
HLYGP26	790301	3041	108 - 251		L0748: 7, H0090: 2, H0264: 1, S0052: 1, L0749: 1 and H0445: 1.
HLYGP46	832311	3042	3 - 644	Lys-12 to Ser-29.	H0486: 1 and H0445: 1.
HLYGR39	744849	3043	132 - 299	Gln-1 to Trp-6.	H0444: 1 and H0445: 1.
HLYGV02	856376	3044	80 - 238		H0457: 1 and H0445: 1.
HLYGV07	879387	3045	87 - 353	Arg-17 to Asn-25.	H0341: 1, H0402: 1 and

						H0445: 1.	
HLYGV66	697627	3046	449 - 607	Glu-39 to Val-45.	H0445: 2 and L0748: 1.		
HLYHB85	773990	3047	78 - 254		H0179: 1 and H0445: 1.		
HLYHG09	590369	3048	3 - 179		L0748: 4, H0556: 1, L0378: 1 and H0445: 1.		
HLYHG18	665713	3049	147 - 248	Gly-29 to Glu-34.	H0580: 1, H0445: 1 and L0362: 1.		
HLYHG45	711741	3050	321 - 599	Phe-8 to Cys-15, Asn-34 to Trp-40.	H0116: 1, H0521: 1 and H0445: 1.		
HLYHI75	767066	3051	249 - 410	Asp-1 to Ser-8, Pro-46 to Asn-54.	H0445: 2		
HLYHK02	919199	3052	188 - 361	Asp-32 to Phe-42.	S0134: 1 and H0445: 1.		
HLYHL74	765292	3053	418 - 546		H0487: 1 and H0445: 1.		
HLYHM86	784724	3054	245 - 427		H0444: 1 and H0445: 1.		
HLYHN47	720019	3055	1 - 309		L0666: 1, L0438: 1, L0748: 1, L0439: 1, H0445: 1 and H0422: 1.		
HLYHN67	920551	3056	1 - 336	Lys-74 to Gly-81, Arg-103 to Glu-112.	H0090: 1 and H0445: 1.		
HLYHQ49	659883	3057	58 - 228		H0445: 2		
HLYHQ79	751428	3058	304 - 561		L0748: 2, H0444: 1 and H0445: 1.		
HMAAA35	773472	3059	3 - 230	Ser-32 to Val-37, Gly-42 to Ala-49, Glu-51 to Gln-59, Gly-62 to His-69.	S0144: 1, H0521: 1, H0522: 1 and L0581: 1.		
HMAAE04	385644	3060	2 - 328		S0144: 1 and S0142: 1.		
HMAAE83	745077	3061	166 - 288	Asn-7 to Arg-15, Gln-26 to Asn-40.	S0144: 2	19q13.4	134790, 191044, 600040, 600138
HMAAF10	968199	3062	1 - 363	Pro-28 to Asp-33, Glu-42 to Val-55, Lys-96 to Ala-107.	S0278: 1 and S0144: 1.		
HMABJ56	907640	3063	91 - 390	His-1 to His-8, Glu-13 to Gly-20.	AR089: 1, AR061: 0 S0116: 1, S0144: 1, S0002: 1 and H0521: 1.		
HMABN34	706264	3064	3 - 302	Pro-14 to Leu-19,	S0144: 3, L0659: 1 and		

HMABQ71	729831	3065	189 - 497	12817	Ser-29 to Arg-39.	H0521: 1.
HMACS56	733395	3066	73 - 360	12818	Ser-17 to Trp-26.	AR089: 1, AR061: 0 S0144: 1 and H0521: 1.
HMADC02	920088	3067	3 - 218	12819		S0144: 2
HMADL77	708074	3068	3 - 155	12820	Ala-1 to Gly-10, Arg-14 to Glu-20.	S0144: 2
HMADM33	970491	3069	4 - 156	12821	Asn-22 to Ile-34.	S0144: 1 and S0002: 1.
HMADX31	697994	3070	29 - 262	12822	Asp-1 to Asp-11, Arg-13 to Lys-19.	S0278: 1 and S0144: 1.
HMADZ55	939916	3071	3 - 746	12823	His-22 to Thr-31, Leu-46 to Cys-62, Leu-93 to Ser-98, Ala-100 to Asp-109, Ser-235 to Ser-240.	S0144: 2 and L0791: 1. AR054: 42, AR051: 21, AR061: 3, AR089: 1, AR050: 1 S0144: 3, H0583: 1, S0278: 1 and L0791: 1.
HMAEJ62	744337	3072	2 - 361	12824	Pro-12 to Arg-18, Ser-53 to Gly-60.	S0144: 2
HMAFD57	734688	3073	3 - 233	12825	Ala-1 to Arg-15, Gly-61 to Ser-67.	H0416: 1 and S0144: 1.
HMAFF77	856267	3074	32 - 244	12826	Ser-10 to Asn-19, Pro-27 to Pro-39.	S0144: 4, S0278: 3, S0142: 2 and H0060: 1.
HMAFM35	925049	3075	246 - 440	12827	Leu-1 to Arg-13.	S0114: 1 and S0144: 1.
HMAFM55	733286	3076	207 - 431	12828		S0278: 2 and S0144: 2.
HMAFP30	692598	3077	1 - 156	12829	Arg-13 to Arg-20.	S0144: 4
HMAFY42	778521	3078	1 - 312	12830		AR089: 1, AR061: 0 S0144: 1 and S0002: 1.
HMAFZ61	741754	3079	14 - 103	12831		S0144: 2
HMAGK69	723186	3080	31 - 417	12832	Arg-1 to Ser-6, Lys-23 to Glu-29, Ala-36 to Glu-42, Ser-77 to Gln-89.	AR089: 2, AR061: 1 S0278: 1 and S0052: 1.
HMAHP62	736039	3081	2 - 334	12833		S0278: 1 and S0144: 1.
HMAHR04	694042	3082	2 - 112	12834	Arg-1 to Gly-8, Thr-17 to Arg-25.	H0161: 1 and S0278: 1.
HMAHS30	823422	3083	1 - 159	12835	Gly-6 to Glu-18, Pro-20 to Gly-30.	S0278: 1 and H0521: 1.

HMAHX69	735355	3084	1 - 357	12836	Gly-47 to Lys-52.	H0556: 1 and S0278: 1.		
HMAIC22	947905	3085	1 - 435	12837	Pro-1 to Arg-16, His-45 to Pro-51.	AR061: 5, AR089: 2 S0278: 2		
HMAIP90	681320	3086	1 - 267	12838		S0278: 2		
HMAIU62	856278	3087	1 - 381	12839	Gly-52 to Pro-60, Phe-70 to Pro-75, Gly-120 to Thr-127.	S0278: 3		
HMAJY01	916259	3088	47 - 199	12840		S0278: 1 and S0142: 1.		
HMAKA11	801917	3089	869 - 1114	12841	Leu-3 to Arg-16, His-32 to Tyr-39, Pro-46 to Gly-54, Tyr-77 to Thr-82.	AR054: 2, AR050: 1, AR051: 0 S0278: 1 and S0144: 1.		
	966282	9569	211 - 606	19321	Ser-8 to Ser-16, Ala-89 to Tyr-95.			
HMAKF82	856311	3090	285 - 542	12842		S0278: 1 and S0002: 1.		
HMALL66	956195	3091	39 - 377	12843	Gln-54 to Val-63, Asn-88 to Pro-93.	AR061: 9, AR089: 3 L0770: 4, H0638: 1, S0278: 1, H0641: 1, L0763: 1, L0809: 1, L0779: 1 and L0758: 1.		
HMAMA69	975074	3092	129 - 377	12844	Phe-1 to Met-6.	S0278: 3		
HMAME11	955999	3093	2672 - 2196	12845		S0278: 1 and S0144: 1.		
HMCAF27	959557	3094	43 - 405	12846		H0477: 1, S0142: 1 and L0800: 1.		
HMCAJ60	586435	3095	2 - 301	12847	Arg-1 to Thr-30, Ser-44 to Gly-57, Lys-63 to Arg-68, Gln-72 to Trp-89, His-91 to Asp-97.	S0142: 2	6q22-q23	107470, 107470, 120110, 121014, 142470, 156225, 164200, 164200, 207800, 601316, 601410, 601757, 602067
HMCAO01	916843	3096	129 - 365	12848		S0142: 1 and S0344: 1.		
HMCAU25	856241	3097	1 - 267	12849	Ser-22 to Trp-35, Thr-43 to Trp-50.	S0142: 1 and S0344: 1.		
HMCAW49	974119	3098	216 - 569	12850	Gly-36 to Met-43, Asp-50 to Ser-58.	S0142: 1, S0344: 1 and H0522: 1.		

HMCAZ67	751804	3099	464 - 586	12851	Glu-8 to Asp-14, Lys-36 to Pro-41.	S0142: 2 and L0748: 1.	16	
HMCBI05	932146	3100	157 - 324	12852		S0142: 2		
HMCCA45	722027	3101	1 - 291	12853	Phe-41 to Ser-48.	S0142: 2		
HMCCB30	692830	3102	53 - 343	12854	Gln-72 to Gly-87.	S0142: 3		
HMCCB62	747136	3103	2 - 241	12855	Ala-1 to Pro-17, Leu-26 to Ala-33.	S0142: 2		
HMCCB78	773660	3104	1 - 303	12856	Pro-9 to Ala-21, Pro-39 to Gly-47.	S0142: 2		
HMCDB42	713051	3105	218 - 409	12857	Lys-14 to Ser-23, Glu-42 to Asp-50.	L0766: 2, L0776: 2, L0740: 2, S0134: 1, H0635: 1, L0370: 1, S0142: 1, L0792: 1, H0521: 1, H0522: 1, L0779: 1 and L0366: 1.		
HMCDM32	699249	3106	185 - 337	12858		H0306: 1 and S0142: 1.		
HMCDN22	895981	3107	1 - 627	12859	Gly-1 to Lys-9, Lys-15 to Gly-20, Arg-26 to Ala-36, Tyr-108 to Leu-113.	AR089: 2, AR061: 1 S0142: 1, L0747: 1 and H0423: 1.		
HMCDT92	974588	3108	1 - 192	12860	Gly-1 to Ile-17, Cys-32 to Gly-41, Asn-57 to Leu-62.	S0142: 3 and S0344: 1.		
HMCFA71	760034	3109	1 - 111	12861		S0344: 2	10q24-q25	157640, 167409, 174900, 180250, 186770, 236730, 271245, 278000, 278000, 600020, 600095, 600512, 601107, 601130, 602082, 602669, 602669
HMCFB22	963794	3110	2 - 217	12862	Ser-20 to Ala-25.	S0344: 2		
HMCFR51	725425	3111	2 - 331	12863		S0344: 1 and S0053: 1.		
HMCFW22	674074	3112	327 - 521	12864	Ser-14 to Cys-32, Pro-50 to Glu-65.	H0402: 1, H0580: 1, S0344: 1, L0794: 1 and S0052: 1.		
HMCGG31	697533	3113	206 - 349	12865	Glu-24 to Asp-40.	L0749: 2, S0140: 1, H0318:		

						1, H0271: 1, S0344: 1, L0761: 1, L0754: 1, L0780: 1, L0755: 1 and L0758: 1.
HMCGJ36	708050	3114	55 - 162	12866		L0526: 2, H0580: 1 and S0344: 1.
HMCGN29	690288	3115	1 - 126	12867		S0344: 2
HMCGW54	846134	3116	196 - 351	12868		H0421: 2, S0344: 1 and L0439: 1.
HMCGY77	753133	3117	1 - 402	12869	Gly-50 to Asn-56, Pro-67 to Leu-72.	AR061: 384, AR089: 164 H0063: 1 and S0344: 1.
HMCHA04	927287	3118	231 - 464	12870	Gly-14 to Arg-24.	S0344: 1 and S0002: 1.
HMCHE16	856332	3119	57 - 416	12871	Pro-28 to Cys-34.	S0344: 1 and H0521: 1.
HMCHG76	769734	3120	1 - 216	12872	Ser-51 to Trp-57.	H0402: 1 and S0344: 1.
HMCHK22	974585	3121	364 - 570	12873		S0344: 3
HMCIA10	963791	3122	159 - 341	12874	Glu-37 to Lys-57.	S0344: 2
HMCIA94	853999	3123	1 - 210	12875	Arg-30 to Glu-35, Lys-52 to Ser-61.	H0486: 2 and S0344: 1.
HMCIK90	788596	3124	153 - 401	12876	Lys-24 to Gln-30, Gly-40 to Asn-46.	S0344: 1 and H0521: 1.
HMCIS32	698541	3125	31 - 261	12877		S0344: 2
HMCKC30	671952	3126	189 - 368	12878		H0264: 1 and S0344: 1.
HMMAB49	462502	3127	1 - 204	12879		AR089: 53, AR061: 4 H0444: 2
HMMAC10	964846	3128	100 - 237	12880		H0063: 1 and H0444: 1.
HMMAC19	953580	3129	59 - 166	12881		H0444: 2 and L0526: 1.
HMMAC79	577951	3130	301 - 456	12882	Pro-18 to His-35.	H0306: 1 and H0444: 1.
HMMAD06	935734	3131	155 - 322	12883	Lys-7 to Leu-12.	H0444: 1 and H0445: 1.
HMMAD35	964749	3132	220 - 393	12884		H0445: 2, L0607: 1 and H0444: 1.
HMMAD40	666181	3133	88 - 225	12885	Glu-1 to Asn-13.	H0444: 2
HMMAD58	891329	3134	27 - 155	12886		AR054: 1, AR050: 1, AR051: 0 H0402: 2 and H0444: 1.
	971602	9570	1157 - 1558	19322	Lys-1 to Lys-13, Gln-39 to Glu-44, Arg-64 to Arg-79.	

HMMAE12	970892	3135	1 - 198	12887		H0444: 1 and H0543: 1.
HMMAE43	715381	3136	48 - 218	12888		S0114: 1 and H0444: 1.
HMMAF44	855916	3137	122 - 364	12889	Lys-24 to Arg-31, Lys-46 to Glu-54.	H0444: 2
HMMAF70	577918	3138	252 - 386	12890	Ser-20 to Met-25.	L0754: 2, H0444: 2 and L0750: 1.
HMMAF73	506275	3139	46 - 294	12891	Gly-57 to Trp-64.	H0444: 2
HMMAH25	677861	3140	191 - 310	12892		H0444: 1 and H0445: 1.
HMMAH45	674953	3141	83 - 3	12893	Phe-2 to Ala-10, Asn-12 to Lys-18.	H0271: 1, S0052: 1 and H0444: 1.
HMMAI03	860715	3142	1 - 171	12894		S0052: 1 and H0444: 1.
HMMAI56	734563	3143	3 - 215	12895		H0444: 2
HMMAI61	718876	3144	297 - 479	12896	Arg-14 to Glu-26.	H0444: 2 and H0576: 1.
HMMAJ18	666195	3145	195 - 314	12897		H0444: 1 and H0445: 1.
HMMAL28	677446	3146	2 - 184	12898		H0090: 1 and H0444: 1.
HMMAL63	744861	3147	286 - 435	12899	Cys-1 to Thr-10, Tyr-24 to Gly-35.	H0069: 1 and H0444: 1.
HMMAP18	666199	3148	256 - 396	12900	Lys-25 to Val-32.	H0444: 2
HMMAP45	717599	3149	169 - 423	12901	Tyr-24 to Gly-30, Pro-46 to Asn-54.	S0053: 1 and H0444: 1.
HMMAP66	668827	3150	190 - 354	12902	His-7 to Asp-14.	S0114: 1 and H0444: 1.
HMMAP72	671947	3151	256 - 372	12903	Lys-13 to Ala-20, Thr-30 to Gly-38.	H0305: 2, S0114: 1, H0589: 1, H0635: 1 and H0444: 1.
HMMAQ04	739304	3152	2 - 427	12904	His-12 to Gly-25, Pro-51 to Arg-67, Pro-95 to Arg-110.	H0402: 1 and H0444: 1.
HMMAQ15	659966	3153	3 - 197	12905	Thr-16 to Thr-24, Arg-30 to Pro-43.	L0658: 1, S0216: 1, L0438: 1, L0748: 1, L0439: 1 and H0444: 1.
HMMAQ35	707273	3154	2 - 208	12906	Thr-29 to Asp-34.	H0402: 1 and H0444: 1.
HMMAR75	919558	3155	121 - 288	12907		L0520: 1, L0532: 1, H0444: 1 and H0445: 1.
HMMAS88	728019	3156	306 - 488	12908		H0444: 2
HMMAS91	496192	3157	202 - 468	12909	Pro-47 to Ser-59, Arg-75 to Lys-81.	H0402: 1 and H0444: 1.

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HMMAT17	662705	3158	116 - 259	Ser-4 to Ile-9.	H0444: 2
HMMAT26	681416	3159	134 - 316	Asn-8 to Gly-14.	H0271: 1, L0527: 1 and H0444: 1.
HMMAT78	733239	3160	207 - 299		H0318: 1 and H0444: 1.
HMMAU10	964281	3161	155 - 334	Asn-4 to Lys-12, Pro-48 to Ala-56.	H0444: 1 and H0423: 1.
HMMAV35	707274	3162	1 - 219	Gly-15 to Ala-21, Arg-27 to Val-35.	S0114: 1 and H0444: 1.
HMMAV74	742642	3163	85 - 291		H0444: 2
HMMAV85	784221	3164	63 - 206	Arg-8 to Thr-15, Ser-26 to Lys-37.	S0114: 1 and H0444: 1.
HMMAV91	854043	3165	2 - 193	His-4 to Arg-17, Pro-49 to Gln-58.	S0052: 2, H0402: 1 and H0444: 1.
HMMBD12	866824	3166	121 - 369	Gln-26 to Gly-33.	S0114: 1 and H0444: 1.
HMMBD29	935775	3167	1 - 225		H0305: 4 and H0444: 1.
HMMBD33	702222	3168	253 - 417		H0444: 2
HMMBD79	490057	3169	4 - 231		H0576: 1 and H0444: 1.
HMMBD81	728362	3170	178 - 270	Gln-22 to Trp-31.	S0114: 1 and H0444: 1.
HMMBH76	959722	3171	82 - 213	Gly-39 to Ser-44.	H0444: 2, H0402: 1 and H0421: 1.
HMMBI50	868199	3172	129 - 401		H0444: 1 and H0543: 1.
HMMBJ26	681407	3173	94 - 267	Thr-1 to Ala-10.	H0255: 1, L0748: 1 and H0444: 1.
HMMBJ31	697735	3174	19 - 156	Pro-10 to Phe-15.	H0444: 2
HMMBM13	577508	3175	75 - 338		S0114: 1, H0402: 1, L0783: 1, L0758: 1 and H0444: 1.
HMMBM24	676996	3176	116 - 316		L0748: 2, S0002: 1 and H0444: 1.
HMMBM31	855965	3177	214 - 384	Lys-1 to Lys-9, Gln-36 to Trp-42.	H0486: 1 and H0444: 1.
HMMBM54	729350	3178	3 - 173	Leu-14 to Leu-20, Ser-42 to Asn-51.	H0444: 2
HMMBM77	771979	3179	142 - 360	Pro-8 to His-18, Arg-35 to His-42, Pro-49 to His-56, Pro-64 to Ser-69.	H0444: 2

HMMBO43	657400	3180	104 - 307	Pro-51 to Arg-58.	S0052: 1 and H0444: 1.
HMMBO46	856831	3181	211 - 489	Gly-3 to Gln-8, Pro-67 to Lys-72.	H0444: 2, H0255: 1 and L0783: 1.
HMMBP10	964268	3182	109 - 351		H0444: 2 and L0471: 1.
HMMBP22	674272	3183	136 - 306	Lys-13 to Asp-18, Ser-32 to Ser-37.	H0444: 2
HMMBP27	682856	3184	102 - 323		H0556: 1, L0754: 1 and H0444: 1.
HMMBQ48	721466	3185	3 - 134		H0116: 1 and H0444: 1.
HMMBR33	702221	3186	259 - 549	Lys-1 to Leu-6, Phe-19 to Gly-25, Leu-33 to Ser-42, Ser-54 to Phe-80.	H0341: 1 and H0444: 1.
HMMBR77	855942	3187	29 - 178		H0444: 2, H0637: 1 and L0662: 1.
HMMBR91	757047	3188	7 - 129		H0444: 2
HMMBR92	791274	3189	26 - 178	Pro-22 to His-27.	H0444: 2
HMMBS41	711733	3190	8 - 211	Val-17 to Asn-24.	H0402: 1 and H0444: 1.
HMMBS61	741656	3191	3 - 227	Gly-6 to Asn-33.	S0140: 1 and H0444: 1.
HMMBT27	682325	3192	174 - 308	Ala-1 to Ser-6.	H0318: 1 and H0444: 1.
HMMBU27	716049	3193	228 - 368		S0114: 1 and H0444: 1.
HMMBU75	490083	3194	49 - 363	Ala-21 to Glu-28.	S0053: 1 and H0444: 1.
HMMBU78	773426	3195	493 - 708		L0748: 3, H0444: 1 and H0445: 1.
HMMBV17	662684	3196	2 - 193	Pro-22 to Asn-37, Ser-51 to Asn-56.	H0421: 1 and H0444: 1.
HMMBV53	727572	3197	13 - 138		H0444: 1 and H0445: 1.
HMMBV71	490078	3198	198 - 383	Glu-17 to Gly-31.	S0116: 1 and H0444: 1.
HMMBX63	729268	3199	53 - 214	Leu-8 to Ala-16.	H0583: 1 and H0444: 1.
HMMBZ91	753799	3200	265 - 396		H0264: 1 and H0444: 1.
HMMCA43	715085	3201	56 - 193		S0052: 1, S0428: 1 and H0444: 1.
HMMCB67	735293	3202	44 - 250	Lys-4 to Trp-13, Cys-23 to Pro-31.	H0444: 2, H0402: 1, H0264: 1 and L0748: 1.
HMMCC09	625368	3203	110 - 364	Trp-7 to Glu-14,	H0444: 2

HMMCD21	670651	3204	59 - 196	12956	Arg-25 to Gly-31, Ala-33 to Arg-42, Phe-58 to Gly-68.	H0265: 1 and H0444: 1.
HMMCE16	577388	3205	13 - 174	12957	Pro-6 to Gly-11.	H0444: 2 and H0271: 1.
HMMCE26	935148	3206	306 - 497	12958		L0748: 1, H0444: 1, H0445: 1 and H0422: 1.
HMMCF94	913661	3207	235 - 396	12959		S0114: 1 and H0444: 1.
HMMCH04	944069	3208	3 - 338	12960	Leu-1 to Arg-17, Pro-30 to Pro-35, Ser-44 to Thr-50, Arg-81 to Ala-90.	AR089: 54, AR061: 5 L0717: 1, H0581: 1, L0752: 1 and H0444: 1.
HMMCI03	923771	3209	181 - 363	12961		H0488: 1, H0521: 1 and H0444: 1.
HMMCI43	864098	3210	268 - 444	12962	Asn-7 to Gln-13.	H0318: 1, H0576: 1 and H0444: 1.
HMMCI67	587819	3211	215 - 376	12963		H0486: 1, H0521: 1 and H0444: 1.
HMMCJ83	855918	3212	205 - 318	12964	Ser-8 to Phe-13.	H0402: 1 and H0444: 1.
HMMCJ93	708060	3213	247 - 528	12965	His-15 to Gln-22, Ser-37 to Glu-43.	H0444: 2
HMMCK81	666792	3214	73 - 360	12966		H0444: 2
HMMCN36	919484	3215	254 - 475	12967	Ser-23 to Cys-40.	H0444: 2
HMOAC95	677110	3216	56 - 220	12968	Pro-49 to Ala-54.	S0278: 1 and H0191: 1.
HMPAA21	670114	3217	544 - 407	12969		H0060: 2, S0116: 1 and L0748: 1.
HMPAE62	754152	3218	3 - 122	12970	Thr-23 to Trp-40.	H0060: 1 and H0444: 1.
HMPAP52	709621	3219	176 - 277	12971	Phe-2 to Ser-8.	H0060: 2
HMPBA34	705509	3220	275 - 442	12972		H0061: 1 and H0271: 1.
HMPBB11	855911	3221	125 - 271	12973	Glu-19 to Tyr-25.	H0061: 2
HMPTA49	723299	3222	211 - 303	12974	Ser-2 to Gly-7, Lys-22 to Gln-27.	H0109: 1 and S0002: 1.
HMPTE27	684607	3223	240 - 359	12975	Glu-18 to Asn-27, Asn-35 to Leu-40.	H0109: 2
HMPTG84	954383	3224	2 - 154	12976		H0109: 2
HMPTI69	932799	3225	211 - 369	12977		H0109: 2

HMQAB40	712805	3226	5 - 211	12978		L0777: 2, H0250: 1, H0521: 1 and L0747: 1.
HMQAG45	723493	3227	153 - 359	12979		H0250: 2
HMQAL95	684917	3228	90 - 317	12980	His-23 to Arg-30.	H0250: 9
HMQAO34	706341	3229	12 - 194	12981		H0250: 2
HMQAP31	825480	3230	45 - 185	12982		H0250: 2
HMQAS25	923515	3231	2 - 340	12983		H0063: 2 and H0250: 1.
HMQAU20	384780	3232	135 - 263	12984		H0250: 2 and L0748: 1.
HMQAX65	856318	3233	2 - 250	12985	Val-33 to Phe-40, Arg-43 to Thr-50.	H0250: 7
HMQBD30	714031	3234	3 - 335	12986		H0250: 3
HMQBH12	825460	3235	49 - 186	12987		H0250: 2 and H0581: 1.
HMQBL13	723212	3236	3 - 344	12988	Gln-1 to Tyr-10, Asn-59 to Arg-64, Lys-71 to Gln-79.	H0250: 2
HMQBL17	664904	3237	2 - 199	12989	Pro-3 to Gln-9, Gln-32 to Cys-50, Glu-58 to Leu-63.	H0250: 3
HMQBL54	708075	3238	191 - 304	12990	Ser-1 to Trp-6.	H0250: 2 and H0556: 1.
HMQBM27	855902	3239	58 - 270	12991	Thr-2 to Arg-33.	H0250: 3
HMQBM59	708073	3240	124 - 345	12992	Asn-6 to Gly-15.	H0250: 2
HMQBN41	683723	3241	155 - 262	12993		H0250: 2
HMQBO17	720569	3242	156 - 305	12994	Gln-1 to Ala-14, Lys-21 to Ile-28.	H0250: 2
HMQBP18	707279	3243	136 - 369	12995	Glu-11 to His-19, Lys-31 to Pro-39.	H0250: 4
HMQBP26	684887	3244	48 - 182	12996		H0250: 4, L0527: 1 and L0747: 1.
HMQBP54	855900	3245	108 - 335	12997		H0250: 3
HMQBT65	708065	3246	173 - 298	12998	Gln-12 to Leu-20.	H0250: 3 and L0665: 1.
HMQBU96	765162	3247	2 - 244	12999	Ala-1 to Gly-19.	H0250: 2
HMQBW05	932509	3248	29 - 160	13000		H0250: 1 and H0318: 1.
HMQBW76	954587	3249	2 - 217	13001	Glu-2 to His-7.	H0161: 3 and H0250: 2.
HMQBX07	954058	3250	34 - 267	13002	Pro-8 to Ala-16.	H0250: 3
HMQBX35	707280	3251	57 - 365	13003	Pro-22 to Glu-27,	H0250: 2

HMQBX74	932510	3252	135 - 73	13004	Ala-33 to Pro-38, Pro-58 to Gly-63, His-89 to Pro-94.	H0250: 3
HMQBY10	968348	3253	178 - 297	13005	Leu-2 to Asp-14.	H0250: 3
HMQBY34	706338	3254	3 - 131	13006	Leu-1 to Cys-7, His-10 to Tyr-15.	H0250: 2
HMQCC67	740625	3255	155 - 253	13007	Lys-1 to Cys-9.	H0250: 2
HMQCK09	384771	3256	31 - 177	13008		H0250: 1 and H0179: 1.
HMQCO77	839604	3257	3 - 287	13009	His-1 to Ser-6, Arg-61 to Thr-66.	H0250: 1 and H0445: 1.
HMQCV51	725828	3258	249 - 359	13010		H0265: 1 and H0250: 1.
HMQDA84	783174	3259	150 - 257	13011	Gln-25 to Asp-30.	H0250: 2
HMQDC34	855890	3260	2 - 313	13012	Leu-16 to Arg-40, Glu-53 to Ala-59.	H0250: 1 and H0090: 1.
HMQDC96	765810	3261	57 - 200	13013	Pro-14 to Ser-19.	H0250: 2
HMQDD41	575536	3262	203 - 361	13014		S0114: 1 and H0250: 1.
HMQDE85	963366	3263	3 - 296	13015		H0250: 1 and H0581: 1.
HMQDN16	712588	3264	62 - 319	13016		S0114: 1 and H0250: 1.
HMQDN77	772436	3265	192 - 419	13017	Asn-1 to Gly-10, Asn-13 to Thr-28, Gly-38 to Arg-53.	H0250: 2
HMQDQ84	783176	3266	43 - 216	13018		H0556: 1, H0250: 1, L0766: 1, L0519: 1 and L0779: 1.
HMQDZ19	940694	3267	3 - 167	13019	Gln-1 to Gly-13.	H0271: 2 and H0250: 1.
HMRAD49	868185	3268	3 - 218	13020		H0189: 1 and S0052: 1.
HMRAD74	765975	3269	343 - 519	13021	Leu-41 to Ala-49.	H0305: 2, H0589: 1 and H0189: 1.
HMSAC03	960949	3270	2 - 145	13022	Asp-27 to Pro-36.	S0002: 3
HMSAH89	935429	3271	1 - 144	13023		S0002: 2 and L0740: 1.
HMSAI08	960482	3272	39 - 224	13024	Arg-5 to Glu-11, Ser-34 to Val-43.	S0002: 1 and H0543: 1.
HMSAI44	715726	3273	160 - 345	13025		S0002: 2, L0794: 2, L0791: 2, L0803: 1, L0792: 1 and L0665: 1.

HMSAO46	720686	3274	204 - 368	13026	Pro-26 to Cys-31.	S0002: 2
HMSAP87	383902	3275	1 - 153	13027		S0002: 2
HMSAQ64	747120	3276	3 - 167	13028		L0750: 3, L0551: 2, L0748: 2, H0486: 1, L0455: 1, H0264: 1, S0002: 1, L0764: 1, L0791: 1 and L0740: 1.
HMSAS62	754156	3277	245 - 358	13029		S0002: 2
HMSAX08	960446	3278	84 - 233	13030		S0002: 3
HMSAX13	961032	3279	140 - 334	13031		S0002: 2
HMSAX31	698439	3280	2 - 160	13032	Asn-18 to Gln-23, Glu-30 to Asp-36.	S0002: 2
HMSAX32	702992	3281	56 - 247	13033	Arg-4 to Cys-10, Val-26 to Ser-34, His-49 to Ser-58.	S0002: 3
HMSAX33	727443	3282	257 - 463	13034	Gln-34 to Glu-39.	S0002: 2
HMSAX85	953708	3283	26 - 160	13035	Asn-15 to Leu-22, Arg-39 to Gly-44.	S0002: 3, H0272: 1 and S0426: 1.
HMSAZ07	855878	3284	2 - 199	13036	Gly-33 to Gly-43.	S0002: 2
HMSBB19	707489	3285	172 - 378	13037	Leu-2 to Ile-13.	L0766: 4, L0743: 2, H0457: 1, S0002: 1, L0761: 1 and L0775: 1.
HMSBB44	715738	3286	190 - 336	13038		S0002: 2
HMSBF59	722005	3287	43 - 237	13039	Thr-53 to Trp-58.	S0002: 3
HMSBF84	739001	3288	16 - 102	13040	Gln-7 to Phe-14, Pro-23 to Arg-29.	H0591: 1 and S0002: 1.
HMSBH79	683595	3289	82 - 252	13041		S0002: 3
HMSBI72	925288	3290	149 - 268	13042		S0002: 2
HMSBM43	510964	3291	176 - 3	13043	Pro-15 to His-27, Asp-35 to Glu-47.	H0265: 1, S0002: 1 and S0052: 1.
	855873	9571	221 - 487	19323	Val-2 to Gln-14, Trp-29 to Ser-36.	
HMSBM81	383978	3292	32 - 271	13044	Arg-8 to Arg-18.	S0002: 2
HMSBN71	766408	3293	15 - 176	13045		S0002: 2
HMSBO55	715684	3294	2 - 148	13046	Lys-1 to Asn-10, Lys-44 to Arg-49.	S0002: 2 and L0766: 2.
HMSBP46	719425	3295	28 - 138	13047		S0002: 2

HMSBP80	855871	3296	153 - 386	13048	Thr-1 to Arg-7.	AR054: 18, AR051: 11, AR050: 1 S0002: 10
HMSBQ93	745862	3297	232 - 420	13049		S0002: 2
HMSBS51	708662	3298	167 - 307	13050		S0002: 2
HMSBS63	926833	3299	214 - 399	13051		H0271: 1, S0002: 1 and S0426: 1.
HMSBS86	785804	3300	1 - 237	13052	Gln-25 to Gly-30, Ser-51 to Gly-59.	S0002: 2
HMSBU22	677327	3301	1 - 171	13053		S0002: 2
HMSBU68	709231	3302	193 - 306	13054		S0002: 2
HMSBV28	970579	3303	97 - 270	13055	Asn-26 to Tyr-35.	S0002: 2
HMSBX38	761392	3304	121 - 324	13056		S0002: 2 and L0748: 1.
HMSBX59	558203	3305	2 - 211	13057		S0002: 2, L0783: 1 and L0809: 1.
HMSBZ69	866997	3306	2 - 697	13058	Ala-14 to Ser-19.	S0002: 2, H0580: 1, L0803: 1 and L0749: 1.
HMSCA33	702821	3307	89 - 397	13059	Ser-1 to Asn-8, Glu-83 to Ser-90.	H0641: 2, S0002: 2, L0766: 2, L0438: 2, L0439: 2, H0657: 1, H0638: 1, H0637: 1, L0763: 1, L0768: 1, L0794: 1, L0655: 1, H0521: 1, H0522: 1, L0779: 1, L0777: 1 and S0026: 1.
HMSCB10	968514	3308	43 - 198	13060	Ser-25 to Arg-32.	H0265: 1, H0581: 1 and S0002: 1.
HMSCD14	924890	3309	1 - 138	13061	Pro-11 to Gly-18.	S0114: 1 and S0002: 1.
HMSCD15	918133	3310	237 - 635	13062		AR089: 1, AR061: 1 S0002: 2 and L0766: 1.
HMSCD45	707281	3311	144 - 236	13063	Ile-1 to Glu-6.	S0002: 2
HMSCE07	954242	3312	21 - 236	13064	Arg-32 to Gly-38.	S0002: 2 and S0426: 1.
HMSCE37	524245	3313	63 - 185	13065	Thr-1 to Leu-6, Asn-19 to Arg-28.	S0002: 2
HMSCF41	951821	3314	532 - 753	13066		H0265: 1, H0556: 1, H0657: 1, S0002: 1, L0761: 1 and H0445: 1.

HMSCF54	731011	3315	108 - 218	13067	Lys-13 to Glu-24.	S0002: 1 and H0522: 1.
HMSCF58	747250	3316	1 - 87	13068	His-13 to Gly-23.	S0002: 2
HMSCI26	530239	3317	499 - 663	13069	Arg-30 to Glu-37.	S0114: 1, S0002: 1 and S0053: 1.
HMSCK06	960601	3318	152 - 358	13070		S0114: 1 and S0002: 1.
HMSCK17	717703	3319	121 - 420	13071		S0114: 2, H0556: 1, S0134: 1, H0255: 1, H0069: 1, H0625: 1 and S0002: 1.
HMSCK38	967576	3320	416 - 664	13072		H0069: 1, S0002: 1 and S0426: 1.
HMSCL01	921754	3321	3 - 146	13073	Pro-23 to Tyr-30.	S0002: 2
HMSCM10	926836	3322	14 - 253	13074	Gly-5 to Ser-11, Gly-35 to Ile-42.	S0002: 1, S0426: 1, L0529: 1, L0543: 1 and L0748: 1.
HMSCM95	884019	3323	44 - 124	13075		S0002: 2
HMSCO18	917009	3324	218 - 451	13076	His-36 to Ser-55, Thr-61 to Thr-67.	S0002: 2 and S0426: 2.
HMSCO39	709592	3325	51 - 170	13077	Thr-11 to Ser-29, Asp-34 to Tyr-40.	S0002: 2
HMSCO60	739685	3326	124 - 291	13078		S0002: 2 and L0599: 1.
HMSCO70	879436	3327	8 - 370	13079	Pro-65 to Asp-72.	H0576: 2, S0002: 1 and L0599: 1.
HMSCR39	601504	3328	454 - 248	13080		H0402: 1 and S0002: 1.
HMSCR82	806176	3329	169 - 264	13081	Asp-5 to Ser-11, Cys-25 to Ser-32.	S0002: 2
HMSCU35	725513	3330	1 - 570	13082	Asn-1 to Ala-14, Pro-16 to Gln-23, Arg-29 to Asn-54.	S0002: 2 and S0426: 1.
HMSCY29	703105	3331	197 - 334	13083		S0002: 2 and L0774: 2.
HMSCY91	789306	3332	434 - 195	13084	Lys-1 to Pro-8, Ser-13 to Ala-19.	H0580: 1 and S0002: 1.
HMSCZ51	724839	3333	3 - 125	13085		S0002: 2
HMSDA03	881563	3334	91 - 345	13086		S0002: 2 and H0341: 1.
HMSDB74	765933	3335	74 - 271	13087	Val-23 to Ile-37.	S0114: 1 and S0002: 1.
HMSDD80	503967	3336	149 - 577	13088	Ala-36 to Trp-54, Lys-72 to Leu-82.	L0748: 3, S0002: 2 and L0740: 2.
HMSDF01	921672	3337	138 - 317	13089		S0002: 2

HMSDG77	708078	3338	18 - 353	13090	Ser-15 to Ser-25, Gly-31 to Ala-39, His-76 to Glu-90.	S0002: 2
HMSDK32	416928	3339	51 - 266	13091		S0002: 2
HMSDM29	703075	3340	27 - 164	13092		S0002: 2
HMSDP23	583670	3341	106 - 324	13093		H0264: 2, S0002: 1 and H0543: 1.
HMSDQ33	702772	3342	1 - 240	13094	Ala-7 to Ala-13, Asp-48 to Gln-57.	S0002: 2 and L0700: 1.
HMSDR06	954682	3343	2 - 127	13095	Asp-6 to Phe-12.	S0002: 2
HMSDR55	732443	3344	76 - 198	13096		S0002: 2
HMSDU43	868183	3345	290 - 3	13097	Leu-6 to Leu-13, Gln-19 to Ser-31, Thr-37 to Leu-43, Lys-87 to Lys-96.	S0002: 2, H0305: 1, L0774: 1 and L0779: 1.
HMSDU73	753010	3346	3 - 128	13098		H0486: 1 and S0002: 1.
HMSDV49	722194	3347	23 - 142	13099	Pro-26 to Gly-31.	S0002: 2
HMSEG37	708656	3348	1 - 216	13100		S0002: 2, L0790: 1 and L0438: 1.
HMSEM59	708076	3349	2 - 55	13101	Lys-7 to Lys-13.	S0002: 2
HMSEM80	718087	3350	54 - 170	13102		S0002: 2
HMSEO23	676369	3351	236 - 406	13103	His-25 to Phe-33, Ser-36 to Asn-41.	S0002: 2
HMSEU01	921628	3352	11 - 178	13104	Glu-1 to Ser-8.	S0002: 2
HMSFH05	932219	3353	1 - 165	13105	Ser-13 to Gly-23.	S0002: 2
HMSFH21	671133	3354	46 - 288	13106	Lys-18 to Glu-35, Glu-57 to Gly-62, Gly-73 to Thr-78.	S0002: 3
HMSFH24	855826	3355	88 - 258	13107		S0002: 2
HMSFH27	682204	3356	30 - 197	13108	Leu-1 to Gln-8, Glu-11 to Ala-22, Leu-28 to Asp-39.	S0002: 2
HMSFH29	689857	3357	1 - 156	13109		S0002: 2
HMSFH31	583757	3358	354 - 1	13110		S0002: 2 and S0114: 1.
	693702	9572	88 - 396	19324		
HMSFH34	706349	3359	24 - 194	13111		S0002: 2

HMSFH39	705586	3360	168 - 269	13112	Glu-7 to Lys-12.	S0002: 4 and L0731: 1.		
HMSFH59	739415	3361	92 - 214	13113	Ser-5 to Lys-10.	S0002: 2		
HMSFH73	764554	3362	87 - 182	13114		S0002: 2		
HMSFH79	775318	3363	2 - 220	13115		S0002: 3		
HMSFH83	780301	3364	1 - 198	13116	Leu-54 to Asp-60.	S0002: 2		
HMSFK32	671136	3365	125 - 241	13117		S0002: 2		
HMSFL10	968061	3366	63 - 269	13118	Thr-14 to Trp-25, Arg-56 to Cys-69.	S0002: 2		
HMSFL41	934139	3367	289 - 471	13119		S0002: 2, S0426: 1, L0438: 1 and H0543: 1.		
HMSFL49	683406	3368	79 - 300	13120	Ser-24 to Cys-29, Asp-35 to Arg-50, Glu-61 to Asp-69.	S0002: 2		
HMSFN48	697991	3369	285 - 458	13121		S0002: 3 and H0422: 1.		
HMSFQ48	721795	3370	3 - 323	13122	Glu-18 to Phe-24, Trp-36 to Arg-44, Gly-62 to Trp-71, His-73 to Asn-79.	S0002: 3, H0179: 1, L0645: 1, S0428: 1 and H0444: 1.		
HMSFQ69	657538	3371	68 - 235	13123	Glu-9 to Gln-14, Arg-41 to Met-47, Glu-49 to Arg-54.	S0426: 2, S0002: 1, L0770: 1 and S0052: 1.		
HMSFR29	693440	3372	43 - 165	13124	Thr-1 to Asn-7, Tyr-12 to Ser-22.	S0114: 1 and S0002: 1.		
HMSFR69	738588	3373	267 - 34	13125	Phe-3 to Pro-24.	S0002: 3		
HMSFR71	760517	3374	129 - 212	13126		S0002: 2		
HMSFR92	861344	3375	275 - 463	13127		S0002: 2 and S0426: 2.		
HMSFS59	739420	3376	75 - 284	13128	Lys-10 to Tyr-17.	S0002: 2		
HMSFS69	757687	3377	2 - 157	13129	Gly-12 to Ala-18.	S0002: 3		
HMSFT23	855812	3378	1 - 240	13130	Glu-38 to Gly-51.	S0002: 2		
HMSFT52	727302	3379	50 - 409	13131	Glu-7 to Gln-15, Gly-35 to Ser-44, Arg-84 to Lys-91.	H0087: 1, S0002: 1 and L0748: 1.	22q11.21	123620, 151410, 600850
HMSFT73	761647	3380	182 - 337	13132		S0002: 2 and H0581: 1.		
HMSFW13	917020	3381	3 - 221	13133		S0002: 2		
HMSFX01	917021	3382	225 - 428	13134	Cys-1 to Ser-6.	S0002: 4 and L0753: 1.		

HMSFX08	959784	3383	73 - 198	13135	Leu-34 to Gln-42.	S0002: 1 and S0426: 1.
HMSFY49	574906	3384	2 - 166	13136	Ser-15 to Phe-20.	S0002: 3 and S0426: 1.
HMSFY70	757338	3385	50 - 142	13137	Leu-3 to Asn-11.	S0002: 3
HMSFZ04	615473	3386	3 - 134	13138		H0318: 1 and S0002: 1.
HMSGA34	706355	3387	16 - 192	13139		S0002: 2
HMSGA41	712490	3388	300 - 470	13140		S0002: 2 and S0218: 1.
HMSGB07	953715	3389	135 - 344	13141	Pro-10 to Lys-18.	S0002: 2
HMSGC69	757337	3390	49 - 183	13142		S0002: 2
HMSGC76	767661	3391	1 - 357	13143	Pro-21 to Ala-30, Lys-32 to Leu-46.	S0002: 2
HMSGD02	920525	3392	232 - 372	13144	Gln-1 to Phe-8, Leu-11 to Pro-17, Leu-37 to Trp-44.	S0114: 1 and S0002: 1.
HMSGD15	959468	3393	95 - 346	13145	Gln-32 to Phe-38, Trp-50 to Ala-60.	S0002: 2
HMSGH49	712123	3394	260 - 406	13146		H0580: 1 and S0002: 1.
HMSGI42	712994	3395	132 - 353	13147		S0002: 2
HMSGK16	861329	3396	151 - 594	13148	Arg-46 to Gln-71, Pro-83 to Pro-88, Gly-107 to Glu-122, Lys-138 to Arg-148.	S0002: 3, S0426: 2, H0580: 1, H0486: 1 and L0748: 1.
HMSGK82	778875	3397	35 - 184	13149	Met-14 to Asn-24.	S0002: 1 and H0521: 1.
HMSGL27	638097	3398	213 - 527	13150	Ser-96 to Ala-102.	AR051: 35, AR054: 29, AR089: 24, AR050: 20, AR061: 7
	855759	9573	318 - 127	19325	Cys-8 to Gly-28, Pro-31 to Glu-36.	S0002: 1, L0766: 1 and H0445: 1.
HMSGP45	699243	3399	219 - 440	13151	Gln-1 to Glu-7.	S0002: 2 and H0179: 1.
HMSGP49	723131	3400	3 - 254	13152	Pro-1 to Ser-8, Tyr-26 to Ser-32.	S0002: 3
HMSGP73	925385	3401	63 - 974	13153	Asp-48 to Met-55, Cys-59 to Ala-65, Leu-72 to Ser-87, Thr-104 to Phe-115.	L0766: 3, H0179: 1, S0002: 1, L0761: 1 and L0786: 1.

HMSGQ30	692880	3402	24 - 242	13154		S0002: 2
HMSGQ57	733869	3403	143 - 277	13155		S0002: 2 and H0271: 1.
HMSGR88	575241	3404	1 - 204	13156		S0002: 2
HMSGT45	722069	3405	128 - 253	13157		H0179: 1 and S0002: 1.
HMSGU52	727300	3406	2 - 154	13158	Pro-29 to Lys-38.	S0002: 2
HMSGU76	677512	3407	201 - 296	13159	Lys-10 to Cys-17, Gln-20 to Gly-27.	S0002: 2
HMSGU89	963497	3408	7 - 252	13160	Leu-2 to Pro-7.	S0002: 1 and H0521: 1.
HMSGV47	920116	3409	151 - 297	13161		S0002: 2 and L0523: 1.
HMSGW16	767621	3410	187 - 357	13162		S0002: 3
HMSGX02	920511	3411	84 - 224	13163	Gly-8 to Leu-22.	S0002: 2
HMSGX12	792437	3412	3 - 137	13164	Glu-1 to Ala-8.	H0638: 1, S0142: 1 and S0002: 1.
HMSGX14	871492	3413	19 - 171	13165	Lys-41 to Thr-50.	AR089: 14, AR061: 5 S0002: 2 and S0052: 2.
HMSGX43	715425	3414	12 - 149	13166	Asp-37 to Phe-46.	S0002: 2
HMSHA04	757509	3415	118 - 249	13167		S0002: 2
HMSHA37	708660	3416	239 - 343	13168	Tyr-30 to Pro-35.	S0002: 2
HMSHB10	964651	3417	142 - 378	13169		S0002: 2
HMSHB14	657543	3418	3 - 269	13170	Glu-69 to Gly-80, Val-83 to His-89.	H0318: 1 and S0002: 1.
HMSHC94	960196	3419	3 - 245	13171	Cys-27 to Ala-34.	S0002: 2
HMSHD50	724397	3420	1 - 213	13172	Lys-7 to Tyr-27, Phe-36 to Ser-43, Pro-53 to Glu-59, Asn-65 to Trp-71.	S0002: 2
HMSHE51	725692	3421	269 - 361	13173		S0002: 2
HMSHE55	923378	3422	2 - 445	13174	Pro-42 to Cys-48, Ala-69 to Leu-97, Gly-103 to Asn-108.	S0114: 1, S0134: 1, S0344: 1 and S0002: 1.
HMSHG24	676545	3423	3 - 362	13175	Cys-9 to Gly-21, Gln-35 to Arg-41.	S0002: 1 and S0052: 1.
HMSHI54	920119	3424	3 - 257	13176	Pro-35 to Phe-43, Glu-62 to His-67, Arg-79 to Leu-84.	S0002: 2

HMSHI94	967167	3425	331 - 591	13177	Gln-20 to Gly-35, Val-43 to Thr-51, Phe-70 to Gly-77.	AR089: 3, AR061: 1 H0271: 1, S0002: 1 and L0766: 1.	1p35-p34	118210, 120550, 120570, 120575, 121800, 130500, 133200, 138140, 138971, 168360, 171760, 171760, 172411, 176100, 176100, 178300, 185470, 230000, 230350, 255800, 602771
HMSHK14	920106	3426	101 - 271	13178		S0002: 2		
HMSHL09	789229	3427	1 - 171	13179		H0264: 1 and S0002: 1.		
HMSHL18	690655	3428	2 - 151	13180		S0002: 3, L0766: 3, L0779: 2, L0664: 1 and L0755: 1.		
HMSHL85	773811	3429	124 - 252	13181	Lys-7 to Lys-13.	S0002: 2		
HMSHM28	855792	3430	335 - 478	13182	Pro-43 to Ala-48.	S0002: 2 and L0759: 1.		
HMSHO64	746582	3431	1 - 411	13183	Ser-11 to Ser-21, Ser-84 to Ala-89, Pro-98 to Arg-107.	AR089: 2, AR061: 2 S0002: 2		
HMSHP08	868170	3432	100 - 378	13184		S0002: 2		
HMSHQ07	953389	3433	292 - 447	13185		S0002: 1 and S0426: 1.		
HMSHR29	924813	3434	2 - 361	13186	Arg-23 to Arg-34, Pro-43 to Ala-51, Asn-85 to Val-90.	H0318: 1 and S0002: 1.		
HMSHR64	746587	3435	184 - 291	13187		S0002: 2		
HMSHT10	964647	3436	28 - 336	13188	Asp-26 to Asp-32, Gly-67 to Pro-72.	S0002: 2		
HMSHT46	959516	3437	59 - 193	13189		S0052: 6 and S0002: 1.		
HMSHU10	964646	3438	213 - 413	13190	Lys-16 to His-25, Leu-27 to His-32.	S0002: 1 and S0426: 1.		
HMSHU55	731775	3439	28 - 519	13191	Ser-6 to Arg-11, Phe-25 to Thr-36, Val-54 to Arg-59, Pro-70 to Asn-80, Arg-106 to Asp-115,	H0264: 1 and S0002: 1.		

HMSHV09	731740	3440	169 - 324	13192	Gly-125 to Ala-132.	S0002: 2
HMSHV44	716596	3441	191 - 496	13193	Asp-25 to Ser-30.	S0002: 1, S0426: 1 and L0748: 1.
HMSHW22	855779	3442	159 - 344	13194	Asp-15 to Lys-22, Arg-28 to Ile-35.	S0002: 2
HMSHW84	783036	3443	69 - 191	13195	Arg-18 to Gly-27.	H0087: 1 and S0002: 1.
HMSHW93	792302	3444	132 - 287	13196		S0002: 1, S0426: 1 and L0754: 1.
HMSHY07	953331	3445	1 - 147	13197	Tyr-21 to Gly-28.	S0002: 2
HMSHZ03	924136	3446	2 - 262	13198	Arg-1 to Leu-17, Pro-40 to Gly-48, Ala-64 to Gln-74.	S0002: 1 and S0426: 1.
HMSHZ56	733386	3447	127 - 315	13199	Gly-1 to Lys-11, Ser-38 to Leu-44.	S0002: 2
HMSIA12	948521	3448	3 - 212	13200	Asp-1 to Arg-9, Pro-15 to Pro-24, Ala-30 to Ser-38, Pro-48 to Gln-59.	S0002: 1 and S0426: 1.
HMSIB73	578777	3449	252 - 416	13201		S0142: 2 and S0002: 1.
HMSIB86	785493	3450	64 - 468	13202	Ser-42 to Cys-49, Thr-53 to Gly-60.	S0002: 2
HMSIC37	685586	3451	35 - 226	13203	Arg-3 to Asp-9.	S0002: 2
HMSIC72	740365	3452	245 - 364	13204	Glu-9 to Gly-14.	S0002: 2
HMSID81	774047	3453	2 - 454	13205		S0002: 6
HMSIE11	967013	3454	58 - 138	13206		S0212: 1 and S0002: 1.
HMSIE52	727146	3455	115 - 321	13207	Ser-9 to Ser-14, Lys-17 to Asn-28, Leu-32 to Asn-37, Glu-44 to Thr-50.	S0002: 2
HMSIG74	725842	3456	183 - 308	13208		L0748: 2, H0083: 1 and S0002: 1.
HMSII81	385937	3457	36 - 191	13209		S0002: 2
HMSIJ85	916552	3458	2 - 151	13210		H0402: 1 and S0002: 1.
HMSIN64	963441	3459	2 - 262	13211	Thr-18 to Asp-27, Pro-37 to Arg-61.	S0426: 2 and S0002: 1.
HMSIN75	728670	3460	66 - 305	13212		S0002: 2

HMSIO61	741811	3461	200 - 394	13213	Leu-8 to Gly-13, Arg-19 to Glu-24, Arg-36 to Gly-43, Gln-45 to Leu-52.	S0002: 2	
HMSIO76	767680	3462	111 - 410	13214		S0002: 2	
HMSIP13	792379	3463	193 - 465	13215	Ile-32 to Ser-37, Lys-55 to His-64.	H0457: 5, S0002: 1 and H0436: 1.	
HMSIP59	739275	3464	1 - 294	13216		H0265: 1 and S0002: 1.	
HMSIS02	920078	3465	330 - 1	13217	Asn-1 to Asn-7, Pro-11 to Gln-16.	S0002: 1 and H0423: 1.	
HMSIT63	745068	3466	150 - 329	13218		H0069: 1 and S0002: 1.	
HMSIT73	708077	3467	76 - 222	13219	Val-1 to Ser-8, Pro-19 to Trp-25.	S0002: 2	
HMSIU50	706363	3468	29 - 178	13220	Glu-1 to Gly-8, Lys-20 to Val-49.	S0002: 2	
HMSIV17	712318	3469	286 - 519	13221		S0002: 2	
HMSJA36	685633	3470	158 - 256	13222		H0083: 1 and S0002: 1.	
HMSJA69	745227	3471	223 - 336	13223		S0002: 2	
HMSJB02	920065	3472	225 - 566	13224	Ser-31 to Ala-44.	S0002: 3	
HMSJB64	969637	3473	69 - 308	13225		S0002: 1 and S0426: 1.	17
HMSJB83	781172	3474	107 - 316	13226	Pro-1 to Phe-9, Ser-43 to His-50.	S0002: 2	
HMSJB93	676414	3475	144 - 359	13227	Thr-6 to Lys-15.	S0002: 2	
HMSJE47	928252	3476	81 - 230	13228		S0002: 1 and S0426: 1.	
HMSJE52	868167	3477	96 - 335	13229	Glu-32 to Gly-41.	S0002: 2	
HMSJE69	513164	3478	609 - 307	13230		H0457: 3 and S0002: 1.	
	855775	9574	229 - 471	19326	Arg-49 to Trp-56.		
HMSJH79	760667	3479	211 - 432	13231	Ala-3 to Arg-26.	S0002: 1 and H0445: 1.	
HMSJI22	674557	3480	3 - 230	13232		H0179: 1 and S0002: 1.	
HMSJI24	928152	3481	306 - 467	13233	Thr-1 to Val-6.	H0370: 1, H0318: 1 and S0002: 1.	
HMSJJ83	781094	3482	320 - 177	13234	Ser-12 to His-18.	S0002: 2 and S0053: 2.	
HMSJL41	922753	3483	1 - 114	13235		H0370: 1 and S0002: 1.	
HMSJM33	702408	3484	74 - 424	13236	Asp-13 to His-22, Pro-41 to Lys-46,	S0002: 2	

Clone						
HMSJO36	708084	3485	208 - 339	13237	Pro-83 to Leu-88.	S0002: 3
HMSJO44	716600	3486	3 - 392	13238	Leu-13 to Glu-26.	S0002: 1 and H0436: 1.
HMSJR07	854106	3487	270 - 449	13239	Arg-7 to Leu-14, Ser-31 to Gln-37, Glu-44 to Ser-56, Gly-79 to Lys-87, Ala-92 to Arg-99, Pro-116 to Gln-127.	H0075: 1, S0002: 1 and L0363: 1.
HMSJR27	855760	3488	352 - 215	13240	Leu-11 to Thr-22.	L0749: 2, H0264: 1 and S0002: 1.
HMSJR41	967070	3489	130 - 255	13241		S0002: 2
HMSJR74	710402	3490	87 - 413	13242	Asp-6 to Thr-12.	H0556: 2, H0265: 1 and S0002: 1.
HMSJT11.	965007	3491	22 - 1185	13243	Thr-1 to Val-18.	S0002: 3, L0777: 3, L0598: 2, L0521: 2, L0794: 2, L0731: 2 and L0768: 1.
HMSJT60	733379	3492	63 - 191	13244	Gln-15 to Val-23.	S0002: 2
HMSJT70	756465	3493	88 - 300	13245	Asn-13 to Pro-19, Ser-34 to Phe-41.	S0116: 1 and S0002: 1.
HMSJT79	954141	3494	3 - 221	13246	Ala-4 to Leu-10.	S0002: 3
HMSJU28	686664	3495	38 - 214	13247	Arg-63 to Ser-72.	S0002: 2
HMSJV67	751602	3496	68 - 397	13248	Leu-31 to Leu-37, Ser-57 to Trp-66, Thr-83 to Phe-95.	S0002: 2
HMSJW12	902568	3497	2704 - 3138	13249	Arg-15 to Tyr-26, Asn-56 to Lys-63, Cys-90 to Leu-95, Ser-129 to Gly-134, Pro-137 to Glu-143.	S0002: 1 and S0426: 1.
	970011	9575	1181 - 1399	19327		
	970012	9576	395 - 3	19328	Arg-15 to Tyr-26, Asn-56 to Lys-63, Cys-90 to Leu-95.	
HMSJW19	744990	3498	2 - 535	13250	Arg-27 to Pro-32.	AR089: 9, AR061: 4

HMSJW25	678096	3499	337 - 546	13251	Trp-1 to Ser-15, Gln-23 to Gly-29.	S0002: 1 and S0426: 1. H0589: 1 and S0002: 1.
HMSJZ11	861381	3500	259 - 468	13252	Pro-16 to Trp-24.	S0344: 1 and S0002: 1.
HMSKB02	920056	3501	203 - 436	13253		S0002: 2
HMSKB24	855883	3502	32 - 208	13254		S0002: 3
HMSKC56	733388	3503	197 - 409	13255	Glu-13 to Glu-21.	S0002: 2
HMSKC66	783028	3504	129 - 338	13256	Ser-28 to Cys-33.	S0002: 2
HMSKC90	675055	3505	2 - 178	13257		S0002: 3
HMSKF32	699273	3506	142 - 237	13258		S0002: 2
HMSKF62	966084	3507	1 - 249	13259	Arg-10 to Ala-17.	H0556: 1 and S0002: 1.
HMSKG23	675885	3508	3 - 170	13260	His-14 to Ser-27.	S0002: 2
HMSKI08	959413	3509	70 - 522	13261		H0581: 1 and S0002: 1.
HMSKQ60	495734	3510	525 - 274	13262		H0271: 1 and S0002: 1.
	953525	9577	107 - 346	19329	Lys-43 to Met-49.	
HMSKS66	413201	3511	90 - 266	13263		S0002: 2
HMSKU36	966289	3512	3 - 386	13264	Thr-14 to Thr-20, Asn-92 to Lys-99, Arg-120 to Arg-128.	S0002: 2 and H0543: 1.
HMSKU90	920151	3513	385 - 648	13265	His-69 to Arg-78.	S0002: 1, S0052: 1 and S0428: 1.
HMSKZ29	690662	3514	274 - 50	13266	Lys-8 to Ser-13.	H0318: 1 and S0002: 1.
HMSLB94	773812	3515	187 - 330	13267		S0002: 2
HMSME83	950970	3516	251 - 523	13268		H0271: 1 and S0426: 1.
HMSMF12	948393	3517	286 - 456	13269		S0426: 2 and H0580: 1.
HMSMG02	915179	3518	8 - 226	13270	Ser-30 to Phe-38, Pro-46 to Ala-56.	S0426: 2
HMSMH05	931095	3519	109 - 318	13271		S0053: 2 and S0426: 1.
HMSMI12	969636	3520	60 - 359	13272		S0426: 2
HMSMK12	841898	3521	466 - 326	13273	Gly-29 to Phe-39.	S0426: 1 and S0216: 1.
HMSML27	870008	3522	124 - 279	13274		H0272: 1 and S0426: 1.
HMSMN04	926746	3523	42 - 113	13275		S0426: 2
HMSMN23	932548	3524	358 - 639	13276	Arg-2 to Thr-9.	H0179: 1, S0426: 1 and L0748: 1.
HMSMQ05	931022	3525	29 - 109	13277		S0426: 2

HMSMV92	934140	3526	291 - 515	13278		S0426: 2		
HMSMX68	861333	3527	233 - 424	13279	Ser-48 to Leu-56.	H0402: 2 and S0426: 2.		
HMSNA44	861293	3528	171 - 629	13280	His-13 to Lys-23, Asp-33 to Gly-39.	S0426: 2	22q13.31	250100, 250800, 250800
HMSNR30	968716	3529	260 - 382	13281		T0002: 1, S0426: 1 and L0748: 1.		
HMSNR92	861314	3530	126 - 488	13282	Thr-30 to Arg-36, His-43 to Ser-50, Ser-69 to Leu-75, Ala-80 to Gly-94.	S0426: 2		
HMSNX38	974321	3531	412 - 597	13283		S0426: 1 and H0521: 1.		
HMSOA29	953329	3532	164 - 361	13284	Glu-28 to Glu-35, Arg-44 to Pro-52.	S0002: 2, S0134: 1 and S0426: 1.		
HMSOA34	936036	3533	390 - 605	13285	Pro-6 to Pro-15.	S0114: 1 and S0426: 1.		
HMSOB43	961779	3534	103 - 204	13286	Gln-10 to Tyr-27.	H0255: 1, H0306: 1 and S0426: 1.		
HMSOC76	916807	3535	153 - 251	13287	Tyr-1 to Lys-9.	H0402: 1 and S0426: 1.		
HMSOE03	922858	3536	282 - 413	13288		S0426: 1 and H0422: 1.		
HMSOG57	861298	3537	270 - 530	13289	Tyr-1 to Ser-9.	S0426: 2 and L0748: 1.		
HMSOM08	958216	3538	2 - 247	13290	Pro-29 to Arg-34, Lys-68 to His-73.	H0063: 1 and S0426: 1.		
HMSON02	918397	3539	330 - 136	13291		S0140: 1, S0426: 1 and L0369: 1.		
HMSON77	861288	3540	625 - 407	13292		S0426: 2		
HMSOO10	963389	3541	526 - 356	13293		S0114: 1 and S0426: 1.		
HMSOP01	915083	3542	35 - 211	13294	Gln-50 to Val-55.	S0426: 2 and S0002: 1.		
HMSOQ75	959856	3543	3 - 257	13295	Ala-9 to Phe-15.	H0250: 1 and S0426: 1.		
HMSOU16	948198	3544	2 - 253	13296		H0179: 1, S0002: 1 and S0426: 1.		
HMSOU92	947760	3545	268 - 74	13297		AR089: 10, AR061: 5		
	948130		564 - 262	19330		S0426: 2 and L0596: 2.		
HMSOV17	835834	3546	311 - 508	13298		S0426: 1, L0748: 1 and H0543: 1.		
HMSOW85	827823	3547	79 - 312	13299	His-8 to Gly-18, Ser-64 to His-77.	H0341: 1 and S0426: 1.		

Clone				SEQ ID	Amino acid regions	Contig	Chromosome	Accession numbers
HMSOX47	948202	3548	56 - 541	13300	His-8 to Gly-18, Asp-31 to Arg-37, Ala-70 to Pro-75, Arg-115 to Val-122.	S0426: 2		
HMSOY61	836082	3549	13 - 249	13301		S0426: 1 and H0521: 1.		
HMSOZ02	918388	3550	417 - 115	13302	Ser-12 to Phe-26, Ser-84 to Arg-96.	L0749: 4, L0748: 2, L0731: 2, H0657: 1, S0426: 1, L0777: 1 and H0423: 1.		
HMSOZ19	958680	3551	183 - 290	13303		S0426: 2 and H0591: 1.		
HMSPA04	922863	3552	136 - 345	13304	Lys-1 to Lys-26, Lys-33 to Asp-44.	S0426: 2		
HMSPA09	948209	3553	3 - 161	13305	Lys-18 to Ser-24, Pro-38 to His-44, Gln-46 to Cys-53.	S0002: 1 and S0426: 1.		
HMSPA41	951971	3554	66 - 638	13306	Ala-17 to Gly-25, Thr-27 to Gly-40, Pro-46 to Pro-66, Pro-77 to Pro-85, Pro-88 to Ala-106.	S0426: 1 and H0542: 1.		
HMSPB03	922853	3555	243 - 392	13307	Arg-1 to Arg-8, Val-12 to Gly-18, Ala-36 to Pro-50.	S0426: 3		
HMSPB63	861264	3556	434 - 604	13308		S0002: 1 and S0426: 1.		
HMSPE92	948104	3557	53 - 238	13309	His-8 to Gly-18, Gly-31 to Ser-38, Met-54 to Ser-61.	H0305: 1 and S0426: 1.		
HMVAJ53	728009	3558	3 - 401	13310		S0212: 1 and H0318: 1.	5q34	109690, 109690, 123101, 180071, 600584
HMVAL74	684574	3559	395 - 532	13311	Lys-1 to Thr-6.	S0212: 1 and H0255: 1.		
HMVAT26	789064	3560	1 - 174	13312	Pro-53 to Cys-58.	S0212: 1 and H0422: 1.		
HMVAW08	962197	3561	178 - 267	13313		S0212: 2	7q22-q31	126650, 126650, 154276, 164860, 173360, 173360, 180105, 222800, 246900, 274600,

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HMVAY55	574215	3562	1 - 240	Gln-1 to Gly-17, Arg-27 to Glu-35, Gly-41 to Gly-50, Pro-59 to Arg-74.	H0271: 2, L0747: 2, S0212: 1, L0788: 1, H0521: 1 and L0740: 1.	5q12-q13	126060, 143200, 143200, 181510, 253200, 268800, 268800, 600354, 600354, 600354, 600887	274600, 602081, 602136, 602136, 602136, 602447
HMVBA36	698060	3563	113 - 304	Glu-15 to Lys-26, Asn-37 to Thr-64.	S0212: 1 and H0421: 1.			
HMVBD70	735696	3564	86 - 277	Ser-3 to Glu-12, Ser-48 to Phe-53.	S0212: 1 and H0580: 1.			
HMVBD84	782910	3565	38 - 268		S0212: 1 and H0612: 1.			
HMVBO01	916072	3566	1 - 336	Ser-5 to His-11.	L0777: 2, S0212: 1, H0402: 1, L0055: 1 and L0603: 1.			
HMVBO34	735873	3567	970 - 764	Ser-1 to Asp-8.	S0114: 1, S0212: 1 and L0769: 1.			
HMVBU26	681408	3568	162 - 341	Leu-15 to Ser-20.	S0212: 1, H0486: 1, L0659: 1 and L0757: 1.			
HMVBV30	861196	3569	123 - 272	Arg-9 to Arg-23.	S0212: 1, T0071: 1 and L0750: 1.			
HMVBW94	883659	3570	2 - 214	Ala-9 to Pro-18.	S0212: 2			
HMVCG47	719936	3571	317 - 412	His-4 to His-10.	S0212: 2			
HMVCO55	868146	3572	2 - 232	Met-8 to Gly-13, Glu-19 to Cys-26.	S0212: 2			
HMVCR47	661425	3573	340 - 459		S0212: 2			
HMVCT75	715950	3574	2 - 151		S0212: 1 and H0318: 1.			
HMVCX10	963828	3575	289 - 474	Tyr-11 to Gln-20.	S0212: 2 and L0756: 1.			
HMVCY46	662311	3576	252 - 371		S0212: 2			
HMVCZ64	767714	3577	130 - 315	Pro-17 to Trp-23.	S0212: 2			
HMVDA11	861185	3578	3 - 215	Arg-1 to Met-6, Asn-31 to Ser-37.	S0212: 2			
HMVDA30	691608	3579	40 - 204	Lys-45 to Val-61, Ser-78 to Arg-88.	S0212: 1 and H0423: 1.			
HMVDF10	970480	3580	3 - 362		S0212: 1 and H0581: 1.			

SEQ ID numbers: 13314, 13315, 13316, 13317, 13318, 13319, 13320, 13321, 13322, 13323, 13324, 13325, 13326, 13327, 13328, 13329, 13330, 13331, 13332

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HMVDF66	915638	3581	3 - 104	13333	Leu-1 to Trp-20.	S0212: 2 and S0002: 1.			
HMVDF83	701907	3582	103 - 285	13334	Met-1 to His-26, Tyr-54 to Phe-60.	S0212: 2			
HMVDG76	861179	3583	1 - 183	13335		S0212: 2			
HMVDH06	934778	3584	34 - 126	13336		S0212: 4, H0580: 1 and L0604: 1.			
HMVDI38	709243	3585	533 - 697	13337		L0748: 5 and S0212: 2.			
HMVDJ75	710475	3586	357 - 557	13338		S0212: 2			
HMVDR49	722581	3587	196 - 381	13339		H0271: 2 and S0212: 1.			
HMVDT07	952488	3588	226 - 462	13340	Pro-53 to Thr-60.	S0212: 2 and L0750: 1.			
HMVDU16	904807	3589	1120 - 1341	13341	Pro-22 to Ser-28, Thr-43 to Lys-74.	AR050: 16, AR051: 2, AR089: 2, AR061: 1, AR054: 1 L0748: 4 and S0212: 2.			
HMVDW09	625070	3590	3 - 320	13342	Arg-16 to Leu-22, Pro-60 to Pro-67.	S0212: 2			
HMVDZ70	878247	3591	1 - 873	13343	Arg-1 to Arg-6, Gln-39 to Ile-45, Ser-48 to Tyr-55, Glu-103 to Thr-114, Arg-132 to Ala-150, Glu-167 to Gln-175.	S0212: 2			
HMVEA91	774609	3592	112 - 2	13344	Arg-1 to Tyr-7.	S0212: 2			
HMVEF33	701908	3593	69 - 338	13345	Ile-31 to Gln-37.	S0212: 2			
HMVEH72	750931	3594	2 - 304	13346	Leu-8 to Glu-15, His-23 to Ala-36, Pro-38 to Gly-43, Arg-68 to Asp-76.	S0212: 2			
HMWBE16	527509	3595	140 - 256	13347	Lys-2 to Tyr-10.	H0341: 2			
HMWBG29	890878	3596	105 - 263	13348	Pro-4 to Ser-9.	H0341: 2, L0606: 1, H0521: 1 and L0748: 1.			
HMWBI47	527593	3597	80 - 340	13349	Gly-19 to Gly-26.	H0341: 4	14q32.1		107280, 107280, 107400, 107400, 122500, 186960, 245200, 601841
HMWBK07	954098	3598	3 - 56	13350	Thr-11 to Lys-18.	H0341: 2			

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HMWBK24	524357	3599	3 - 161	Pro-3 to Ala-14.	H0341: 1 and S0053: 1.		
HMWBM09	967687	3600	2 - 124	Lys-18 to Ser-23, Gly-28 to Ile-37.	H0341: 2		
HMWBN56	745698	3601	2 - 289	Gly-43 to Pro-51.	H0341: 1 and S0278: 1.		
HMWBO07	839560	3602	44 - 250	Cys-19 to Glu-26, His-63 to Tyr-69.	H0341: 2		
HMWBR86	731650	3603	61 - 192		H0556: 1 and H0341: 1.	7q22-q31.1	126650, 126650, 150240, 154276, 173360, 173360, 180105, 222800, 246900, 602136, 602136, 602136, 602447
HMWBV45	861152	3604	150 - 317		H0341: 3		
HMWCG29	723779	3605	86 - 226		H0341: 2		
HMWCQ09	924634	3606	48 - 338	Pro-7 to Gly-21, Ser-57 to Lys-63, Ser-91 to Gln-97.	H0341: 1, H0402: 1 and H0069: 1.		
HMWCQ58	738372	3607	3 - 125		H0341: 1 and H0521: 1.		
HMWCV08	960083	3608	2 - 301	Ala-37 to Arg-48.	H0341: 1 and S0002: 1.		
HMWCX60	531395	3609	3 - 104	Tyr-27 to Cys-32.	H0341: 2		
HMWDD54	932261	3610	80 - 457		H0341: 2		
HMWDD75	800023	3611	2 - 184		H0341: 1 and H0090: 1.		
HMWDF88	906769	3612	147 - 362	Trp-14 to Asp-27.	AR061: 207, AR089: 155 H0341: 1 and H0083: 1.		
HMWDH23	676216	3613	2 - 142		H0341: 2		
HMWDL52	921603	3614	10 - 327	Pro-37 to Phe-51, Arg-63 to Leu-68, Arg-71 to Ser-77.	H0341: 2		
HMWDQ83	558021	3615	119 - 289	Lys-1 to Asp-14.	H0341: 2		
HMWDW60	712083	3616	1 - 315	Pro-16 to Leu-23, His-26 to His-31, Pro-34 to Thr-50, Pro-53 to Ala-68, Lys-71 to Ser-79, Asn-84 to Gly-90.	H0341: 1 and H0486: 1.		

HMWDY93	573513	3617	168 - 332		H0341: 2
HMWDZ73	573754	3618	121 - 234		H0341: 1 and H0318: 1.
HMWDZ77	573494	3619	1 - 138	Asp-9 to Gly-15, Ser-34 to His-42.	H0341: 2 and L0542: 1.
HMWEE04	709334	3620	3 - 326		H0341: 2
HMWEG24	781017	3621	317 - 478		H0341: 1 and H0318: 1.
HMWEJ73	767384	3622	3 - 374	His-1 to Lys-13, Glu-19 to Lys-40, Glu-42 to Ala-65, Pro-71 to Thr-92.	H0341: 2
HMWEK11	967362	3623	561 - 824	Gly-26 to Ser-34.	H0271: 2, H0341: 1 and L0438: 1.
HMWEK39	573604	3624	81 - 248	Arg-1 to Gly-6.	H0341: 2
HMWEM85	783973	3625	179 - 322		H0341: 2
HMWEP07	953749	3626	1 - 819		L0747: 2, H0341: 1, H0543: 1 and H0423: 1.
HMWES31	861129	3627	89 - 316		H0341: 2
HMWFC21	752826	3628	2 - 376	Gly-1 to Tyr-18, Pro-20 to Trp-26, Leu-31 to Met-39, Arg-63 to Leu-75.	H0341: 2 and H0543: 1.
HMWFE01	917150	3629	1 - 135	Trp-3 to Ser-9.	H0341: 2
HMWFH47	738220	3630	36 - 485		H0341: 1, T0041: 1 and L0748: 1.
HMWFI54	573598	3631	38 - 274	Ser-29 to Trp-35.	H0341: 2
HMWFO10	954979	3632	1 - 189		H0556: 1 and H0341: 1.
HMWFP33	702618	3633	1 - 213		H0341: 2 and L0803: 1.
HMWFP60	576880	3634	134 - 325	Asn-4 to Val-10.	H0341: 1 and S0053: 1.
HMWFQ91	573551	3635	3 - 263	Lys-1 to Lys-6.	H0341: 2
HMWFR11	967371	3636	127 - 2		H0341: 1 and H0543: 1.
HMWFU05	861119	3637	106 - 312		H0341: 1 and H0306: 1.
HMWFU85	659578	3638	299 - 418	Phe-5 to Gly-10.	H0591: 3, H0543: 2, H0341: 1, L0657: 1 and L0759: 1.
HMWFW75	727236	3639	2 - 112		H0341: 1 and H0423: 1.
HMWGC08	959838	3640	110 - 262		H0341: 2

HMWGF22	861104	3641	27 - 311	13393		H0341: 3		
HMWGG55	920575	3642	2 - 172	13394	Gln-2 to Tyr-28.	H0341: 2	12q13	107777, 123940, 139350, 139350, 148040, 148041, 148043, 148070, 231550, 600194, 600231, 600536, 600808, 600956, 601284, 601769, 601769, 601928, 602116, 602153
HMWGK95	576885	3643	109 - 255	13395	Pro-12 to Thr-20.	H0341: 2		
HMWGQ80	575822	3644	207 - 365	13396	Pro-16 to Pro-32, Asp-39 to His-44.	L0748: 3, L0754: 2, H0341: 1 and H0402: 1.		
HMWGT07	953454	3645	2 - 520	13397	Arg-9 to Trp-16.	H0341: 1 and H0090: 1.		
HMWGU64	823460	3646	227 - 427	13398	Trp-31 to Arg-37, Gly-46 to His-52.	H0341: 2	9p13	230400, 250250
HMWGV63	576854	3647	2 - 130	13399		H0341: 2		
HMWGX38	709249	3648	89 - 256	13400	Trp-1 to Ser-8, Ile-21 to Leu-32, Ala-46 to Lys-56.	H0341: 2	1q21-q22	104770, 107670, 110700, 135940, 145001, 146790, 152445, 152445, 159001, 159440, 159440, 159440, 174000, 179755, 182860, 182860, 182860, 186780, 191030, 191315, 230800, 230800, 266200, 600897, 600923, 601105, 601412, 601652, 602491
HMWGX50	959293	3649	311 - 745	13401		H0341: 2		
HMWHA91	684346	3650	104 - 247	13402		H0341: 2		
HMWHB03	861108	3651	189 - 374	13403	Arg-9 to Ser-14.	H0341: 2		

HMWHF58	584538	3652	248 - 418	13404		H0341: 2		
HMWHM30	676413	3653	106 - 333	13405		H0341: 1 and H0272: 1.		
HMWHN70	851334	3654	22 - 354	13406	Ala-12 to Ser-19, His-44 to Tyr-53, Leu-74 to Glu-88.	H0341: 3		
HMWHS25	678166	3655	25 - 321	13407	Thr-51 to Glu-60, Ser-65 to Asn-75.	H0265: 1 and H0341: 1.		
HMWHZ50	724431	3656	281 - 508	13408		H0341: 2		
HMWIA18	424132	3657	1 - 225	13409		H0341: 1 and H0521: 1.		
HMWIF10	964707	3658	345 - 82	13410	Ser-1 to Ala-6, Lys-12 to Gly-17, Cys-25 to Ile-33.	H0305: 2, L0749: 2, H0341: 1 and L0759: 1.		
HMWIL67	791275	3659	2 - 253	13411	Cys-5 to Gly-19, Thr-28 to Leu-35, Ala-37 to Lys-44.	L0745: 3, H0341: 1, L0746: 1 and H0444: 1.		
HMWIM26	681845	3660	127 - 249	13412		H0341: 2		
HMWIQ47	653198	3661	86 - 325	13413	Ser-49 to Gln-54.	H0341: 2 and S0052: 1.		
HMWIS96	746475	3662	420 - 692	13414	Gly-16 to Gly-27.	H0556: 3 and H0341: 1.		
HMWIT95	793450	3663	3 - 413	13415	Leu-7 to Gly-13, Leu-35 to Val-41, Ala-52 to Gln-66, Glu-72 to Leu-87, Trp-125 to Asp-130.	H0341: 1 and H0402: 1.	15q22	102578, 109700, 151670, 154550, 601780
HMWIU48	917690	3664	2 - 451	13416	Ala-1 to Ile-11, Gly-27 to Gly-33, Arg-40 to Arg-47, Pro-76 to Trp-81, Arg-121 to Gly-126, Gly-129 to Cys-138, Gln-141 to Phe-148.	H0341: 1, H0264: 1 and L0748: 1.	1q21	104770, 107670, 110700, 135940, 145001, 146790, 152445, 152445, 159001, 174000, 179755, 182860, 182860, 182860, 191315, 230800, 266200, 600897, 601105, 601412, 601652, 602491
HMWIV48	795649	3665	40 - 171	13417		H0341: 1, H0306: 1 and		

Clone	No.	No.	Residues	SEQ ID	Description	Library	Chromosome	OMIM
HMWIX21	670972	3666	82 - 213	13418		H0580: 1.		
HMWIZ03	924227	3667	79 - 264	13419	Ser-1 to Phe-11, Gln-32 to Arg-37.	H0341: 1, H0090: 1 and L0779: 1.		
HMWJB29	668700	3668	137 - 352	13420	Pro-35 to Pro-40, Ser-51 to Leu-61.	H0341: 1, H0264: 1 and S0002: 1.		
HMWJC76	688926	3669	99 - 287	13421		H0341: 2		
HMWJF10	964705	3670	3 - 353	13422	Pro-7 to Ala-14, Pro-34 to Gly-39.	H0341: 2		
HMWJG85	918724	3671	2 - 424	13423	Ala-1 to Gly-8, Thr-11 to Gly-18, Asp-23 to Asn-30.	H0341: 1, H0609: 1, H0271: 1, H0521: 1 and L0581: 1.	12q23-q24.1	124200, 147440, 160781, 181405, 235800, 261600, 261600, 600175, 601406, 601620, 601621
HMWJH15	757807	3672	106 - 204	13424		H0341: 2		
HMXAA03	964494	3673	1 - 72	13425		H0552: 2		
HMXAA08	959267	3674	11 - 172	13426	Pro-26 to Ser-36.	H0552: 4		
HMXAA39	670501	3675	42 - 224	13427	Arg-21 to Arg-37.	H0552: 4, L0761: 3, H0583: 2, H0556: 1, H0650: 1, L0785: 1, S0002: 1, L0655: 1, H0445: 1 and H0543: 1.		
HMXAA56	733331	3676	3 - 56	13428		H0552: 5		
HMXAB21	714384	3677	2 - 97	13429		H0552: 4		
HMXAB69	661849	3678	1 - 150	13430		H0552: 6		
HMXAC70	964492	3679	5 - 151	13431		H0552: 12		
HMXAC83	780385	3680	1 - 117	13432	Pro-8 to His-21.	AR054: 5, AR051: 2, AR050: 1, H0552: 4		
HNEAB76	674781	3681	73 - 174	13433		H0179: 1, H0063: 1 and S0426: 1.		
HNEAC51	523767	3682	3 - 272	13434	Pro-74 to Gly-79.	H0179: 3, L0749: 2 and L0791: 1.		
HNEAJ21	671370	3683	21 - 125	13435	Leu-1 to Lys-10.	H0179: 1 and H0542: 1.		
HNEAJ57	735083	3684	106 - 258	13436		H0486: 1 and H0179: 1.		
HNEAK41	711557	3685	72 - 239	13437	Lys-6 to Asn-12.	H0179: 1 and S0002: 1.		

HNEAN61	507302	3686	3 - 173	13438	Lys-15 to Thr-26.	H0179: 1 and S0002: 1.		
HNEAN85	524222	3687	148 - 300	13439	Gln-26 to Gln-42.	H0305: 2, H0306: 1, H0402: 1, H0580: 1, H0179: 1, S0052: 1, S0428: 1, S0053: 1, S0031: 1 and H0444: 1.		
HNEBI66	529168	3688	3 - 263	13440	Gly-4 to Gly-11.	H0179: 1 and H0087: 1.		
HNEBJ08	958742	3689	192 - 410	13441		AR051: 76, AR054: 73, AR050: 42 S0218: 1, H0179: 1 and S0428: 1.		
HNEBJ35	529576	3690	60 - 182	13442	Ile-3 to Gly-8.	H0179: 1 and H0543: 1.		
HNEBJ48	919274	3691	380 - 529	13443	Glu-1 to Arg-11, Pro-13 to Gly-22.	H0179: 1 and H0445: 1.		
HNEBM07	954173	3692	1 - 171	13444	Gly-1 to Pro-9.	H0075: 1 and H0179: 1.		
HNEBY19	527894	3693	142 - 294	13445		H0179: 2		
HNEBY26	527891	3694	62 - 331	13446		H0179: 2		
HNEBY30	523571	3695	99 - 254	13447	Ile-6 to Gln-24, Thr-31 to Asp-52.	H0179: 2		
HNEBY32	527889	3696	178 - 339	13448		H0179: 2		
HNEBY34	507211	3697	2 - 316	13449		H0179: 2		
HNEBY44	773793	3698	72 - 227	13450		H0179: 2		
HNEBY46	527887	3699	252 - 386	13451	Gln-3 to Ser-9, Cys-18 to Trp-27, Pro-34 to Pro-39.	H0179: 2		
HNEBY48	527895	3700	68 - 322	13452		H0179: 2		
HNEBY71	527883	3701	1 - 258	13453	Gly-1 to Ser-9, Ser-18 to Gln-23.	H0179: 2		
HNECD65	861062	3702	27 - 308	13454	Asp-1 to Gly-7.	S0114: 1 and H0179: 1.		
HNECE07	954094	3703	84 - 212	13455		L0774: 2, H0402: 1 and H0179: 1.		
HNECE14	927590	3704	2 - 106	13456		H0179: 1 and H0264: 1.		
HNECF59	507208	3705	1 - 114	13457	Lys-10 to Val-17.	H0179: 2		
HNECF76	506532	3706	52 - 288	13458		H0179: 1 and H0063: 1.		
HNECI57	529873	3707	1 - 168	13459		H0179: 1 and H0271: 1.		
HNECK47	720588	3708	13 - 174	13460		H0486: 1 and H0179: 1.		

HNECK66	932501	3709	1 - 228	13461	Arg-16 to Val-24, Pro-27 to Arg-34, Gln-37 to Leu-42.	S0114: 1 and H0179: 1.	
HNECK67	527100	3710	270 - 410	13462		S0052: 2, H0179: 1 and L0375: 1.	
HNECK83	935045	3711	18 - 332	13463	Ser-16 to Gly-22, Arg-37 to His-45, Val-56 to Arg-64.	H0585: 10, H0141: 2, H0556: 1, H0656: 1 and H0179: 1.	
HNECL71	527810	3712	65 - 235	13464		H0179: 2	
HNECM64	861031	3713	2 - 274	13465	Ala-1 to Ser-8.	H0179: 2	
HNECO69	861068	3714	24 - 137	13466		H0179: 2	
HNECR93	529868	3715	3 - 299	13467		H0271: 2 and H0179: 1.	
HNECS77	527511	3716	326 - 490	13468	Trp-37 to Glu-43.	H0436: 2, S0114: 1 and H0179: 1.	
HNECT70	958356	3717	2 - 193	13469		H0179: 1 and S0428: 1.	
HNECV31	466977	3718	53 - 304	13470	Pro-10 to Glu-15.	H0179: 2 and H0521: 1.	
HNECV66	575633	3719	151 - 336	13471		H0179: 2 and H0271: 1.	
HNECW09	968378	3720	61 - 189	13472		H0179: 2	
HNECW20	527508	3721	200 - 505	13473		H0179: 2	
HNECW35	855430	3722	1 - 423	13474	Pro-6 to Met-11.	H0179: 3, S0114: 1 and H0581: 1.	
HNECX77	507305	3723	88 - 363	13475	Val-21 to Pro-39, Thr-57 to Ser-64, Pro-83 to Gln-92.	H0179: 1 and H0271: 1. 19q13.1	164731, 172400, 172400, 180901, 180901, 221770, 248600, 600918, 602716
HNEDD27	527589	3724	189 - 389	13476		H0179: 2	
HNEDD80	507186	3725	49 - 336	13477		H0179: 2	
HNEDD90	789187	3726	307 - 173	13478	Asp-38 to Met-44.	H0255: 1 and H0179: 1.	
HNEDE48	721895	3727	78 - 263	13479		H0580: 1 and H0179: 1.	
HNEDE59	527060	3728	10 - 276	13480	Ser-5 to Phe-18, Asp-28 to Glu-43.	H0179: 3	
HNEDF71	572390	3729	33 - 134	13481		H0421: 1 and H0179: 1.	
HNEDG11	967643	3730	94 - 219	13482	Ser-5 to Gly-19.	H0265: 1 and H0179: 1.	
HNEDG35	790570	3731	27 - 233	13483		H0421: 1 and H0179: 1.	

HNEDG56	746708	3732	163 - 339	13484	Leu-13 to Gly-20.	H0179: 2			
HNEDH54	527505	3733	56 - 289	13485	Cys-18 to Cys-24.	H0179: 1 and H0271: 1.			
HNEDH96	697747	3734	436 - 573	13486		H0179: 1 and H0444: 1.			
HNEDI80	573138	3735	117 - 365	13487	Arg-40 to Thr-47.	H0179: 2			
HNEDK04	923910	3736	1 - 153	13488		H0179: 2 and H0271: 1.			
HNEDK16	702570	3737	3 - 446	13489	His-1 to Trp-8, Ala-31 to Leu-37, Pro-39 to Pro-50, Ser-54 to Ser-73.	AR051: 13, AR054: 10, AR050: 2 / H0179: 2 and H0271: 1.			
HNEDK22	527503	3738	192 - 377	13490		S0114: 1 and H0179: 1.			
HNEDK74	765880	3739	84 - 203	13491		H0657: 1, H0179: 1 and H0264: 1.			
HNEDN42	527499	3740	1 - 192	13492	Gly-27 to Lys-32, Ser-45 to Pro-53.	H0179: 2			
HNEDO95	573136	3741	57 - 233	13493	Pro-34 to Pro-45.	H0179: 2			
HNEDQ51	527816	3742	32 - 196	13494		H0179: 2			
HNEDQ68	586485	3743	764 - 925	13495		AR050: 7, AR054: 3, AR051: 1 / H0542: 2, H0318: 1, H0179: 1 and L0527: 1.			
HNEDR48	683470	3744	35 - 166	13496	Gln-36 to Gly-41.	H0402: 1 and H0179: 1.			
HNEDS03	925091	3745	1 - 126	13497	Leu-7 to Gly-12.	H0179: 2			
HNEDS18	954586	3746	153 - 4	13498	Arg-1 to Arg-7.	H0179: 3			
HNEDS29	703032	3747	1 - 147	13499		H0580: 1 and H0179: 1.			
HNEDU01	909832	3748	156 - 416	13500		H0179: 1 and S0002: 1.			
HNEEA41	868102	3749	1 - 189	13501		H0265: 1, H0650: 1 and H0179: 1.			
HNEEB62	573185	3750	149 - 295	13502	Met-17 to Trp-26.	H0179: 2			
HNEEB84	781940	3751	1 - 225	13503		H0179: 1 and H0521: 1.			
HNEEC81	844318	3752	108 - 320	13504		H0179: 2			
HNEED12	893698	3753	403 - 531	13505	Ser-34 to Gln-43.	H0179: 1 and S0428: 1.			
HNEED48	668747	3754	329 - 577	13506	Ser-14 to Ile-21.	L0748: 2, H0556: 1, H0457: 1, H0179: 1 and L0455: 1.			
HNFAA13	667712	3755	203 - 472	13507	Glu-6 to Gly-24, Cys-35 to His-46.	H0271: 1 and H0436: 1.			

HNFAA80	781578	3756	100 - 288	13508	Phe-11 to Gln-20.	H0318: 1, H0271: 1 and H0444: 1.
HNFAA83	530295	3757	34 - 135	13509	His-1 to Gln-7.	H0271: 2
HNFAD95	784714	3758	374 - 739	13510		L0746: 3, H0436: 2, L0745: 2 and H0271: 1.
HNFAE07	861069	3759	2 - 136	13511		H0179: 1 and H0271: 1.
HNFAF40	861021	3760	2 - 208	13512	Pro-19 to Leu-27.	H0271: 2
HNFAG69	530349	3761	2 - 175	13513	Pro-4 to Arg-16, Tyr-36 to Asn-42.	H0271: 2
HNFAH45	662053	3762	33 - 308	13514	Lys-1 to Val-7.	H0271: 2
HNFBS51	530064	3763	96 - 218	13515	Ser-32 to Pro-39.	H0271: 2
HNFBT11	967784	3764	8 - 232	13516		H0271: 2
HNFBU53	861015	3765	100 - 360	13517		H0255: 1 and H0271: 1.
HNFCI32	699706	3766	3 - 137	13518		H0271: 1 and S0052: 1.
HNFCI41	861014	3767	271 - 546	13519	Glu-2 to Pro-9.	S0474: 1 and H0271: 1.
HNFCI77	761390	3768	171 - 440	13520	Asn-10 to His-16.	H0271: 1 and H0444: 1.
HNFCL68	585328	3769	2 - 121	13521	Pro-1 to Leu-16.	H0271: 2
HNFCS04	927836	3770	64 - 297	13522		L0766: 3, H0271: 1, S0052: 1, L0779: 1 and L0731: 1.
HNFCT27	529964	3771	3 - 185	13523	Ala-6 to Lys-11.	H0271: 2
HNFCT67	927833	3772	119 - 229	13524		H0271: 2
HNFCW14	955293	3773	2 - 193	13525		H0179: 1, H0271: 1 and S0002: 1.
HNFCY33	861005	3774	168 - 401	13526		H0486: 1 and H0271: 1.
HNFDC21	529867	3775	166 - 312	13527		H0271: 2
HNFDC91	496241	3776	7 - 294	13528	Gly-61 to Gly-68.	H0271: 1 and S0053: 1.
HNFDJ17	960239	3777	1 - 201	13529		H0271: 2 and L0600: 2.
HNFDK40	854017	3778	315 - 488	13530		H0179: 1, H0271: 1 and H0444: 1.
HNFDN04	537317	3779	232 - 426	13531	His-42 to Asn-49.	L0740: 2, H0271: 1 and H0264: 1.
HNFDN41	712571	3780	212 - 388	13532	Leu-10 to Asp-15, Glu-27 to Lys-33.	H0271: 3 and H0264: 1.
HNFDN89	787085	3781	1 - 186	13533		H0271: 1 and H0264: 1.
HNFDO81	537341	3782	119 - 244	13534		H0271: 2

HNFDO84	575347	3783	126 - 437	13535		H0271: 2
HNFDP09	719215	3784	2 - 265	13536		H0271: 1 and S0052: 1.
HNFDR35	527500	3785	72 - 221	13537		H0179: 1, H0271: 1 and L0667: 1.
HNFDR83	537343	3786	93 - 278	13538		H0271: 2
HNFDV41	537337	3787	1 - 201	13539	Gly-1 to Val-9, Gln-19 to Gln-28, Leu-33 to Gly-38, His-46 to Arg-56.	H0271: 2
HNFED22	537334	3788	1 - 93	13540	Pro-13 to Ser-18.	H0271: 2
HNFED43	583458	3789	13 - 336	13541	Arg-54 to Pro-64.	L0794: 2, L0805: 2, L0789: 2, H0271: 1, L0803: 1, L0774: 1, L0776: 1, S0053: 1 and L0589: 1.
	583459	9579	581 - 441	19331	Arg-21 to Arg-30.	
HNFEF43	424792	3790	188 - 343	13542	Leu-13 to Gly-18, Glu-29 to Trp-34.	H0271: 3
HNFEF83	850982	3791	190 - 516	13543	Pro-1 to Ala-7, Leu-26 to Ser-35.	AR051: 12, AR054: 1, AR050: 1 H0580: 3, H0254: 2, H0521: 2, H0656: 1, H0457: 1, H0271: 1 and H0488: 1.
HNFEF95	971171	3792	227 - 469	13544	Lys-19 to Tyr-29, Ser-56 to Val-67.	H0271: 1 and S0052: 1.
HNFEG09	526641	3793	154 - 261	13545		H0179: 1 and H0271: 1.
HNFEG31	934595	3794	242 - 346	13546		H0271: 1, L0766: 1 and H0522: 1.
HNFEH12	825406	3795	1 - 147	13547	Asp-29 to Cys-36.	H0271: 2
HNFEI12	518245	3796	19 - 108	13548	Ala-14 to Ser-29.	H0271: 2
HNFEK33	957396	3797	1 - 267	13549		H0637: 1 and H0271: 1.
	971651	9580	911 - 759	19332	His-41 to Leu-51.	
HNFEM76	860967	3798	136 - 375	13550		S0052: 3, H0271: 1 and H0521: 1.
HNFEM86	537336	3799	91 - 243	13551		H0271: 2
HNFEN20	669916	3800	15 - 389	13552	Ser-2 to Glu-10, Gly-12 to Gly-17.	H0271: 1 and S0053: 1.

HNFEO61	530355	3801	2 - 148	13553			H0271: 2
HNFER89	787086	3802	152 - 370	13554	Gly-9 to Ser-28.		H0271: 1 and S0428: 1.
HNFES44	860920	3803	2 - 274	13555	Pro-42 to Asp-47.		H0271: 2
HNFEU62	574398	3804	1 - 87	13556			H0271: 2
HNFEV41	575549	3805	1 - 87	13557			H0271: 2, L0768: 1 and L0794: 1.
HNFEV66	575552	3806	1 - 111	13558	Gly-6 to Arg-11.		H0271: 2
HNFFB21	671263	3807	134 - 439	13559			H0271: 1 and S0144: 1.
HNFFC21	574693	3808	281 - 415	13560	Arg-4 to Ala-14.		H0271: 2 and H0556: 1.
HNFFD88	577422	3809	59 - 220	13561	Asp-11 to Glu-17, Lys-24 to Gly-32.		H0271: 1 and H0416: 1.
HNFFF81	574678	3810	2 - 67	13562			H0271: 2
HNFFG79	781693	3811	1 - 192	13563	Lys-12 to Val-17.		H0271: 2
HNFFH03	921923	3812	45 - 185	13564	Gly-7 to Glu-16, Asp-34 to Glu-39.		L0439: 4, H0402: 1, H0271: 1, L0438: 1 and H0444: 1.
HNFFH04	574679	3813	10 - 174	13565	Lys-14 to Asp-24.		H0271: 2 and H0486: 1.
HNFFJ48	860311	3814	2 - 238	13566			H0271: 1 and S0428: 1.
HNFFK15	920748	3815	29 - 202	13567			H0271: 2
HNFFK36	529978	3816	3 - 239	13568			H0271: 2
HNFFK61	740644	3817	118 - 315	13569	Ala-1 to Lys-8, Gly-32 to Gly-37.		H0271: 3 and L0766: 1.
HNFFM25	705856	3818	481 - 738	13570	Glu-6 to Val-14.	6	H0271: 2 and L0596: 1.
HNFFO61	742049	3819	20 - 343	13571			H0581: 1 and H0271: 1.
HNFFO76	727306	3820	60 - 200	13572	Glu-3 to Pro-15, Leu-19 to Ser-26.		H0271: 1 and S0002: 1.
HNFFR05	860851	3821	137 - 397	13573	Asp-38 to Arg-54.		H0271: 2
HNFFR46	574618	3822	1 - 162	13574			H0271: 2
HNFFS14	558192	3823	69 - 236	13575			H0271: 3
HNFFS23	574677	3824	102 - 233	13576			H0271: 2
HNFFS46	574669	3825	41 - 169	13577			H0271: 2
HNFFS96	860904	3826	1 - 102	13578	Ser-14 to Gly-21.		H0271: 2
HNFFT30	574616	3827	3 - 242	13579			H0271: 2
HNFFT62	574623	3828	189 - 404	13580			H0271: 2
HNFFT71	574617	3829	2 - 187	13581	Ala-1 to Arg-6.		H0271: 2
HNFFT83	506711	3830	2 - 424	13582	Val-31 to Tyr-66,		H0271: 2

HNFFV05	932364	3831	112 - 264	13583	Gly-68 to Leu-73.	H0271: 3
HNFFV66	574153	3832	200 - 322	13584	Met-11 to Val-16.	H0271: 2
HNFFV73	574143	3833	94 - 267	13585		H0271: 2
HNFFX21	574217	3834	190 - 321	13586	Ser-1 to Asp-11, Leu-13 to Gly-25.	H0402: 1 and H0271: 1.
HNFFX55	574218	3835	195 - 461	13587	Asn-1 to Trp-7, Ala-14 to Pro-19, Val-30 to Ser-35.	H0271: 2
HNFFX79	574152	3836	1 - 219	13588		H0271: 2
HNFFZ53	526845	3837	75 - 245	13589		H0271: 3
HNFFZ89	913701	3838	256 - 534	13590	Lys-1 to Glu-7, Asn-9 to Phe-14, Asn-71 to Ile-80.	H0271: 1, H0416: 1, L0758: 1 and H0543: 1.
HNFFZ91	860897	3839	59 - 235	13591	Lys-1 to Ile-13, Ser-21 to Arg-27.	AR050: 34, AR051: 30, AR054: 28 H0179: 1, H0271: 1, S0428: 1 and H0543: 1.
HNFGB37	577342	3840	2 - 100	13592	Val-3 to Ser-13.	H0271: 1 and H0416: 1.
HNFGC17	860899	3841	23 - 361	13593	Leu-35 to Ile-44, Tyr-57 to His-65, Ala-67 to Asn-72.	H0179: 1, H0271: 1, H0264: 1 and S0052: 1.
HNFGC46	967538	3842	37 - 189	13594		H0271: 2
HNFGC53	860900	3843	2 - 241	13595		H0271: 2 and L0749: 1.
HNFGC57	782183	3844	249 - 434	13596	Asn-20 to Asp-26, Asn-34 to Ser-41.	H0271: 2, H0265: 1 and H0556: 1.
HNFGC64	851981	3845	96 - 350	13597		H0486: 1 and H0271: 1.
HNFGE16	781720	3846	1 - 129	13598	Glu-8 to Gly-17.	H0179: 1 and H0271: 1.
HNFGE36	684992	3847	3 - 140	13599		H0271: 2 and L0581: 1.
HNFGF83	526843	3848	3 - 140	13600		H0271: 2, H0581: 1 and H0543: 1.
HNFGH24	524419	3849	178 - 324	13601		H0271: 1 and H0187: 1.
HNFGH71	954601	3850	230 - 379	13602		H0179: 1 and H0271: 1.
HNFGI01	921431	3851	2 - 481	13603	Gln-6 to Leu-23.	H0271: 2, L0761: 1, L0752: 1, L0755: 1 and L0596: 1.
HNFGI49	909707	3852	3 - 299	13604	Arg-29 to Arg-34.	H0271: 2

HNFGI84	783204	3853	2 - 130	13605		H0271: 2
HNFGI93	526534	3854	2 - 199	13606	Glu-3 to Cys-21.	H0271: 2
HNFGK28	574599	3855	158 - 334	13607	Glu-1 to Asn-10, Asn-29 to Lys-34, Asn-43 to Gly-48.	H0271: 2
HNFGK29	574593	3856	41 - 235	13608		H0271: 2
HNFGK39	574592	3857	1 - 237	13609	Ser-1 to Phe-6, Pro-22 to Arg-27, Glu-31 to Glu-36, Ser-42 to Arg-48.	H0271: 2
HNFGL31	420241	3858	23 - 445	13610		H0402: 1 and H0271: 1.
HNFGL94	709264	3859	1 - 150	13611	His-6 to Arg-12.	H0271: 2
HNFGM40	524398	3860	127 - 357	13612	Pro-5 to Cys-11, Ser-25 to Ala-31, Pro-39 to Lys-44.	H0271: 2
HNFGM61	750800	3861	3 - 170	13613	Ala-2 to Trp-7, Thr-10 to Leu-26.	H0271: 2 — 1q21-q25 — 104770, 107300, 107670, 110700, 131210, 135940, 136132, 145001, 146790, 150292, 152445, 152445, 159001, 173610, 174000, 179755, 182860, 182860, 182860, 191315, 208250, 230800, 230800, 233710, 266200, 600897, 600995, 601105, 601412, 601518, 601652, 602491
HNFGM76	908665	3862	1 - 507	13614	Ala-2 to Pro-8, Glu-13 to Pro-20, Gln-30 to His-51, Val-58 to His-64, Thr-71 to Arg-76,	AR089: 8, AR061: 6 L0761: 3, H0457: 2, L0769: 2, L0800: 2, L0794: 2, H0580: 1, H0271: 1, L0796: 1, L0803: 1, L0789: 1,

				Ser-81 to Glu-94, Thr-101 to Phe-108, Arg-119 to His-126, Gln-139 to Gly-148, Ser-151 to Ser-159.	L0792: 1, L0777: 1 and L0731: 1.		
HNFGN36	575567	3863	67 - 327	Thr-12 to His-29.	H0271: 3, L0766: 1, S0052: 1 and L0591: 1.		
HNFGN60	574588	3864	56 - 334		H0271: 2		
HNFGP07	953915	3865	302 - 517	Thr-42 to Pro-49.	H0271: 1 and H0542: 1.		
HNFGP31	574643	3866	42 - 125		H0271: 1 and H0264: 1.		
HNFGP64	932413	3867	84 - 230		L0766: 3, H0271: 2, H0306: 1 and H0402: 1.		
HNFGQ23	750597	3868	213 - 383	Thr-22 to Phe-28.	H0580: 1 and H0271: 1.		
HNFGQ58	574583	3869	180 - 314	Leu-1 to Ile-8.	H0271: 2		
HNFGU56	574587	3870	3 - 305	Asn-3 to Ser-9, Ala-21 to Trp-29, Ser-51 to Trp-56, Arg-63 to Arg-68, Ile-89 to Pro-94.	H0271: 2		
HNFGW96	915309	3871	430 - 693	Gln-10 to Tyr-17, Arg-19 to Gln-30, Lys-48 to Ala-54.	H0416: 2, L0439: 2, H0271: 1 and L0776: 1.		
HNFGX55	795918	3872	344 - 721		H0271: 4, H0179: 1 and L0748: 1.	9q22	229600, 264300, 600542, 602014, 602088
HNFGZ03	924695	3873	317 - 493		H0271: 1 and S0052: 1.	19q13	109560, 205900, 600652, 600757
HNFHA11	967520	3874	1 - 360		AR089: 11, AR061: 8 H0271: 2		
HNFHD40	970875	3875	327 - 482		H0271: 2 and H0444: 1.		
HNFHF18	666827	3876	313 - 191	Leu-1 to Ser-8.	H0271: 2		
HNFHF32	699518	3877	3 - 323	Ser-6 to Leu-12.	H0271: 2		
HNFHF33	574146	3878	153 - 314		H0271: 2		
HNFHF53	574148	3879	170 - 322	Arg-1 to Ser-7, Glu-9 to Asn-16.	H0271: 2		
HNFHG35	574684	3880	23 - 205		H0271: 2		

HNFHH12	968808	3881	84 - 182	13633	Arg-2 to Asn-14.	H0271: 2		
HNFHH31	574697	3882	34 - 213	13634		H0271: 1 and H0090: 1.		
HNFHH33	574703	3883	180 - 362	13635		H0271: 1 and H0090: 1.		
HNFHH83	523646	3884	38 - 181	13636		H0271: 2		
HNFHH88	521932	3885	36 - 128	13637		H0179: 1 and H0271: 1.	19q13.3-q13.4	113900, 126340, 126391, 130410, 134790, 138570, 160900, 173850, 191044, 258501, 600040, 600138, 602225, 602225
HNFHI17	523569	3886	33 - 203	13638	Asn-4 to Gly-17.	H0271: 3		
HNFHJ10	964802	3887	149 - 352	13639	His-10 to Ser-24, Gln-32 to Phe-55.	H0271: 3	19q13	109560, 205900, 600652, 600757
HNFHK07	953538	3888	11 - 208	13640	Ser-8 to Ile-16.	H0179: 1 and H0271: 1.		
HNFHK46	860844	3889	3 - 446	13641	His-1 to Asn-8, Ser-15 to Gln-22, Leu-27 to Arg-32.	H0271: 3		
HNFHK77	576186	3890	165 - 422	13642	Pro-38 to Lys-43.	AR061: 1, AR089: 0 H0271: 2		
HNFHK85	577324	3891	114 - 311	13643	Lys-1 to Gly-23.	S0428: 2, H0271: 1, L0770: 1, L0666: 1 and S0053: 1.		
HNFHM09	657247	3892	3 - 131	13644	Pro-6 to Gly-11.	H0271: 1, S0002: 1 and S0052: 1.		
HNFHM47	916624	3893	40 - 360	13645		L0771: 2, H0556: 1, H0657: 1, S0116: 1, H0402: 1, H0580: 1, S0278: 1, H0179: 1, H0271: 1, S0002: 1, L0752: 1 and S0196: 1.		
HNFHM58	674349	3894	3 - 134	13646		H0556: 1 and H0271: 1.		
HNFHM60	662643	3895	7 - 87	13647		H0585: 1 and H0271: 1.		
HNFHN03	860887	3896	165 - 272	13648		H0271: 2		
HNFHQ01	938114	3897	173 - 334	13649	Gln-1 to Trp-8.	H0271: 2 and S0428: 1.		
HNFHQ23	921950	3898	41 - 322	13650	Arg-60 to Lys-65.	H0271: 1, H0416: 1 and H0521: 1.		
HNFHQ32	765827	3899	111 - 323	13651	Pro-34 to Ser-44.	H0271: 2 and H0090: 1.		

HNFHQ67	576147	3900	1 - 240	Thr-59 to Arg-73.	H0271: 2
HNFHR70	586494	3901	63 - 344	Leu-10 to Glu-19.	H0271: 3 and H0179: 1.
HNFHS84	725666	3902	171 - 383	Asp-13 to Pro-27.	H0271: 1 and H0416: 1.
HNFHS85	576118	3903	1 - 195	His-6 to Val-11.	H0271: 1 and H0416: 1.
HNFHU20	512927	3904	310 - 471		H0271: 2
HNFHU27	683506	3905	171 - 1	Lys-28 to Glu-36, Lys-52 to Lys-57.	L0766: 2, H0341: 1 and H0271: 1.
HNFHU85	506309	3906	164 - 376	Ser-2 to Gly-11.	H0271: 2
HNFHV81	766220	3907	59 - 400		H0271: 2
HNFHW14	939763	3908	2 - 448	Leu-9 to Met-15, Thr-25 to Cys-37, Glu-40 to Gly-45, Leu-109 to His-115.	AR061: 32, AR089: 21 H0271: 2
HNFHW40	577110	3909	3 - 314	Pro-25 to Gln-33.	H0271: 1, H0063: 1 and L0750: 1.
HNFHW70	757261	3910	115 - 315	Met-3 to Lys-15, Gly-39 to His-45.	H0486: 1 and H0271: 1.
HNFHW81	577329	3911	2 - 196	Gly-1 to Asn-6, Met-17 to Phe-23, Thr-36 to Thr-52.	H0255: 1, H0271: 1, S0052: 1 and S0053: 1.
HNFHX24	934305	3912	335 - 589	Pro-5 to Asn-14, Glu-20 to Thr-30.	H0271: 1, L0773: 1, L0363: 1, S0428: 1, L0748: 1 and L0749: 1.
HNFHX44	716852	3913	84 - 293	Gly-2 to Gly-8.	H0457: 3, H0250: 1, H0179: 1, H0271: 1 and S0053: 1.
HNFHY29	860879	3914	2 - 583	Glu-16 to Trp-34.	H0635: 1 and H0271: 1.
HNFIA33	861010	3915	2 - 223	Thr-10 to Thr-15.	H0457: 1, H0179: 1, H0271: 1 and H0416: 1.
HNFIB47	523438	3916	230 - 319		H0179: 2 and H0416: 1.
HNFIB67	577326	3917	125 - 33	Phe-1 to Asn-12.	H0416: 1 and S0052: 1.
HNFIC22	577442	3918	86 - 352	Pro-1 to Gly-11, Glu-19 to Ala-27, Gln-49 to Arg-63.	H0271: 1 and H0416: 1.
HNFIC43	707264	3919	226 - 363	Arg-18 to Ser-25.	H0416: 1 and S0144: 1.
HNFIE18	576032	3920	2 - 166	Cys-23 to Ala-29, Asn-33 to Leu-38.	H0416: 2

HNFIG07	918389	3921	2 - 478	13673	Gly-50 to Glu-61, Pro-63 to Gln-79, Arg-98 to Ser-107, Pro-126 to Arg-137.	H0581: 1 and H0416: 1.
HNFIH79	576143	3922	264 - 109	13674		H0416: 1 and H0422: 1.
HNFIJ46	919275	3923	240 - 476	13675		H0416: 1 and H0445: 1.
HNFIK03	921951	3924	3 - 194	13676		H0416: 1 and S0052: 1.
HNFIK37	576151	3925	90 - 236	13677		H0416: 2
HNFIK44	506258	3926	94 - 330	13678		H0416: 2
HNFIM13	657201	3927	102 - 434	13679	Arg-47 to Lys-60, Arg-67 to Trp-73.	H0416: 2
HNFIM16	661500	3928	272 - 111	13680	Pro-31 to Arg-36.	H0416: 1 and H0488: 1.
	860869	9581	590 - 925	19333	Gln-51 to Thr-78, Lys-95 to Thr-100.	
	964396	9582	327 - 587	19334		
HNFIN33	702415	3929	160 - 333	13681	Lys-1 to Cys-6, Ser-14 to Ser-19.	H0271: 1 and H0416: 1.
HNFIN60	740372	3930	183 - 443	13682	Pro-18 to Gly-23, Phe-33 to Ala-39, Pro-64 to Trp-79.	H0416: 2
HNFIN67	574569	3931	3 - 326	13683	Pro-19 to Pro-30, Pro-46 to Ser-55.	H0305: 2, H0271: 1 and H0416: 1.
HNFIN83	779925	3932	1 - 318	13684	Pro-11 to Val-35, Gln-44 to Leu-52, Gln-92 to Phe-103.	H0402: 1 and H0416: 1.
HNFIO27	573095	3933	74 - 373	13685	Lys-3 to Trp-10, Lys-12 to Phe-17, Ser-32 to Ser-39, Cys-64 to Gln-71, Ala-73 to Asp-78.	H0271: 1, H0416: 1, S0052: 1 and S0053: 1.
HNFIO50	724374	3934	3 - 332	13686	Glu-8 to Ser-16, Ser-41 to Trp-46, Gly-50 to Gly-55, Leu-72 to Arg-80.	H0416: 1 and S0053: 1.
HNFIO82	921037	3935	1 - 210	13687	Ser-7 to Trp-22, Asn-30 to Arg-39,	H0271: 1 and H0416: 1.

				Pro-41 to Glu-46.	
HNFIP50	965283	3936	369 - 1067	Arg-1 to Trp-17, Ser-50 to Ser-56, Ser-74 to Ala-93, Gly-105 to Ser-116, Thr-177 to Leu-183.	H0656: 1 and H0416: 1.
HNFIP71	760366	3937	1 - 423	Cys-6 to Thr-15, Asn-29 to Arg-34, Ala-49 to Ser-54, Pro-81 to Gly-86.	H0069: 1 and H0416: 1.
HNFIQ17	768043	3938	183 - 440	Pro-6 to Arg-17, Pro-62 to Gln-74.	H0271: 1, H0416: 1 and H0488: 1.
HNFIQ74	765566	3939	2 - 136	Glu-1 to Phe-13, Ser-17 to Trp-39.	H0271: 1 and H0416: 1.
HNFIR02	928109	3940	3 - 311	Gln-1 to Ser-11, Cys-20 to Pro-26, Ala-30 to Arg-35, Pro-49 to Gly-57, Ser-72 to Cys-78, Pro-80 to Asp-86, Arg-96 to His-102.	H0416: 2
HNFIR32	848254	3941	161 - 472	Arg-55 to Gln-61.	H0370: 1, H0416: 1 and H0436: 1.
HNFIR86	781175	3942	3 - 194		H0271: 1 and H0416: 1.
HNFIS51	725648	3943	146 - 376		H0416: 2
HNFIT31	697961	3944	1 - 90		H0416: 1 and H0436: 1.
HNFIU07	953268	3945	100 - 321	Pro-12 to Ala-27.	H0556: 1 and H0416: 1.
HNFIU14	967558	3946	2 - 166	Ala-11 to Gly-21, Pro-41 to Gly-51.	H0271: 1 and H0416: 1.
HNFIU24	677178	3947	192 - 392		H0271: 1 and H0416: 1.
HNFIU56	733363	3948	267 - 416	Phe-19 to Lys-27.	H0416: 1 and S0002: 1.
HNFIV38	709265	3949	171 - 335		H0416: 1, H0063: 1 and L0803: 1.
HNFIV73	764409	3950	3 - 242	Asp-32 to Arg-48, Tyr-69 to Asn-74.	H0271: 1 and H0416: 1.
HNFIW62	740598	3951	172 - 354	Asn-46 to Ala-61.	H0271: 1 and H0416: 1.

HNFIZ47	720315	3952	3 - 188		H0271: 1 and H0416: 1.
HNFJA29	941525	3953	24 - 494	Arg-9 to Leu-15, Cys-36 to Thr-43, Cys-102 to Trp-110, Lys-123 to Glu-128, Met-151 to Gln-157.	H0179: 2 and H0271: 2.
HNFJA60	740362	3954	3 - 125	Asn-1 to Asp-7.	H0271: 3
HNFJA78	723390	3955	1 - 201		H0271: 1 and H0264: 1.
HNFJB80	752489	3956	219 - 392	Leu-39 to Gly-44.	H0556: 1, H0271: 1 and H0543: 1.
HNFJE30	574145	3957	1 - 243		H0271: 2
HNFJG33	702411	3958	5 - 181	Asn-5 to Asp-12, Leu-15 to Trp-22.	H0271: 2
HNFJG44	860847	3959	3 - 590	Asp-1 to Ser-18, Ser-24 to Tyr-31, Glu-36 to Asp-41, Ile-49 to Leu-57, Glu-98 to Glu-103, Gln-118 to His-135, Gly-140 to Ala-146.	H0271: 1, H0063: 1 and L0439: 1.
HNFJH59	738593	3960	263 - 472	Arg-53 to Arg-60.	H0271: 1 and H0522: 1.
HNFJH70	956187	3961	676 - 900	Arg-2 to Thr-7.	S0053: 2, S0114: 1, S0116: 1, H0580: 1, H0179: 1, H0271: 1, H0090: 1, H0264: 1, L0805: 1, L0527: 1 and L0367: 1.
HNGAC50	724666	3962	19 - 123		H0402: 1 and S0052: 1.
HNGAD53	527977	3963	1 - 225		S0052: 2
HNGAF45	526940	3964	5 - 295	Gly-1 to Ala-11.	S0116: 2, L0667: 1, L0803: 1, S0052: 1, L0748: 1 and L0749: 1.
HNGAH10	968271	3965	3 - 167	Lys-11 to Thr-24.	S0052: 1 and S0216: 1.
HNGAH27	573087	3966	152 - 271	Gln-30 to Asp-35.	S0052: 2
HNGAI23	676296	3967	197 - 367	Pro-11 to Arg-21, His-43 to Lys-53.	S0052: 2
HNGAI35	558467	3968	2 - 169		S0052: 2

HNGAJ10	860751	3969	54 - 230	13721	Arg-14 to Lys-23, Phe-37 to Thr-45.	S0052: 2
HNGAJ82	577407	3970	2 - 214	13722		S0052: 2
HNGAK12	660682	3971	3 - 248	13723	Gln-1 to Lys-8, Pro-33 to Ser-58.	H0090: 1 and S0052: 1.
HNGAK70	860770	3972	3 - 344	13724	Arg-4 to Ile-11.	S0052: 2
HNGAL51	531719	3973	102 - 233	13725	Ser-2 to Phe-11.	S0052: 2
HNGAL84	573099	3974	180 - 1	13726	Gly-1 to Thr-11, Gly-55 to Asn-60.	S0052: 2
HNGAL88	574666	3975	80 - 256	13727	Thr-22 to Ile-29.	S0052: 2
HNGAL92	953889	3976	3 - 212	13728	Ser-26 to Phe-32, Val-34 to Arg-42.	S0052: 2
HNGAN28	685436	3977	2 - 115	13729		S0052: 2
HNGAN78	577412	3978	127 - 444	13730	Pro-80 to Ser-88.	S0278: 1 and S0052: 1.
HNGAO40	660305	3979	69 - 170	13731	Ala-25 to Gly-33.	S0052: 1 and S0053: 1.
HNGAP18	666852	3980	127 - 333	13732	Asp-7 to Val-15, Arg-18 to Glu-26.	S0052: 2
HNGAP59	916323	3981	2 - 166	13733	Pro-3 to Gln-8.	S0144: 1 and S0052: 1.
HNGAQ54	574647	3982	3 - 164	13734	Arg-46 to Arg-54.	S0052: 2
HNGAR83	574470	3983	3 - 290	13735		S0052: 2
HNGAS51	773208	3984	21 - 218	13736		S0052: 1 and S0216: 1.
HNGAU59	860839	3985	3 - 89	13737		S0052: 2
HNGAU65	925692	3986	1 - 249	13738	Cys-5 to Ser-11, Pro-37 to Gly-42.	S0052: 1 and S0053: 1.
HNGAV04	506589	3987	268 - 444	13739	Thr-29 to His-34.	S0052: 2
HNGAV25	574671	3988	103 - 285	13740	Asn-1 to Cys-6,	S0052: 2
HNGAV53	573092	3989	15 - 257	13741	Glu-16 to Ser-25, Leu-41 to Lys-49, Val-70 to Gln-79.	S0052: 2
HNGAV79	574661	3990	117 - 383	13742		S0052: 3
HNGAV84	574651	3991	3 - 107	13743		S0052: 2
HNGAV88	860753	3992	217 - 453	13744	Gly-1 to Glu-7.	S0052: 2
HNGAW25	574645	3993	84 - 284	13745	Ser-1 to Asn-6, Arg-11 to Thr-23.	S0052: 2

HNGAW40	711454	3994	2 - 229	13746		S0052: 2
HNGAX82	507313	3995	22 - 258	13747		H0271: 1 and S0052: 1.
HNGAZ49	715380	3996	1 - 216	13748	Gly-41 to Arg-46, Pro-59 to Pro-65.	H0402: 1, L0365: 1 and S0052: 1.
HNGBB06	936080	3997	2 - 271	13749	Thr-24 to His-35.	S0052: 2, L0742: 1 and L0748: 1.
HNGBC50	868082	3998	907 - 1395	13750	Gly-26 to Thr-36, His-88 to Lys-103.	AR050: 7, AR054: 3, AR051: 1 S0052: 4
HNGBE26	684761	3999	227 - 373	13751	Pro-6 to Lys-13.	S0052: 2
HNGBF41	571331	4000	99 - 371	13752	Ser-15 to Lys-20, Ala-28 to Lys-33.	S0052: 2 and S0216: 1.
HNGBF80	574475	4001	1 - 132	13753		S0052: 2
HNGBG20	860739	4002	57 - 218	13754	Glu-2 to Asn-17, Gln-31 to Ala-36.	S0052: 2
HNGBG50	577364	4003	1 - 219	13755		S0052: 1 and S0053: 1.
HNGBH04	574469	4004	138 - 28	13756		S0052: 2
HNGBH77	577361	4005	115 - 243	13757		S0052: 2
HNGBI10	968246	4006	1 - 165	13758		S0052: 2
HNGBI35	574403	4007	10 - 114	13759		S0052: 2
HNGBI70	781978	4008	2 - 442	13760		S0052: 2
HNGBI88	574409	4009	86 - 343	13761		S0052: 2
HNGBI95	785983	4010	2 - 127	13762		S0052: 2
HNGBJ40	948741	4011	373 - 576	13763	Glu-1 to Gln-7, Leu-13 to Gln-20, Lys-32 to Gly-39.	S0052: 2 and S0428: 1.
HNGBJ84	573072	4012	1 - 180	13764	Lys-1 to Lys-11.	S0052: 2
HNGBJ96	574474	4013	3 - 122	13765		S0052: 2
HNGBN36	526808	4014	216 - 437	13766	Arg-8 to Leu-30, Ala-32 to Leu-37.	S0052: 3
HNGBO34	932408	4015	227 - 373	13767		S0052: 2
HNGBP21	671258	4016	2 - 208	13768		H0250: 1, S0052: 1, L0754: 1 and L0581: 1.
HNGBP28	421816	4017	1 - 213	13769		S0052: 2
HNGBP35	526806	4018	1 - 75	13770	Gly-1 to Asn-7,	S0052: 3 and S0426: 1.

Clone				SEQ ID	Amino acid range	Code
HNGBQ20	859846	4019	227 - 526	13771	Ser-15 to Phe-20.	S0052: 1 and S0216: 1.
HNGBQ75	573047	4020	83 - 253	13772	Val-1 to Tyr-12.	S0052: 2
HNGBS88	575561	4021	86 - 247	13773	Ser-44 to Arg-52.	S0052: 2
HNGBT44	574400	4022	153 - 281	13774		S0052: 2
HNGBT58	577325	4023	200 - 337	13775	Ala-1 to Arg-17.	S0052: 2
HNGBT72	579064	4024	169 - 285	13776	His-12 to Thr-20, Ile-34 to Tyr-39.	S0052: 2
HNGBU15	574467	4025	71 - 151	13777		S0052: 2
HNGBV67	574468	4026	2 - 148	13778		S0052: 2
HNGBW63	574466	4027	3 - 131	13779	Lys-9 to Ser-18.	S0052: 2
HNGBX64	574472	4028	1 - 108	13780		S0052: 2
HNGBZ16	667293	4029	220 - 318	13781	Gln-9 to Lys-14.	S0052: 2
HNGBZ17	575717	4030	292 - 450	13782		S0052: 2 and S0428: 1.
HNGBZ20	812895	4031	21 - 176	13783	Gln-24 to Glu-32, Ser-41 to Trp-50.	S0052: 2
HNGBZ55	573069	4032	143 - 256	13784		S0052: 2 and L0800: 1.
HNGBZ92	574464	4033	2 - 151	13785		S0052: 2
HNGCA47	574465	4034	2 - 205	13786		S0052: 2 and S0216: 1.
HNGCA61	574461	4035	4 - 219	13787	Arg-4 to Arg-10, Arg-27 to Pro-44.	S0052: 2
HNGCB44	674670	4036	158 - 289	13788	Gln-18 to Asp-24.	S0052: 1 and S0053: 1.
HNGCC47	926947	4037	1 - 144	13789	Trp-11 to Leu-17, Pro-20 to Pro-28, Ala-32 to Gly-48.	S0052: 1 and S0428: 1.
HNGCD08	959963	4038	22 - 177	13790	Cys-16 to Arg-28, Cys-30 to Asn-40.	S0052: 1 and S0216: 1.
HNGCE85	970738	4039	2 - 154	13791		S0052: 2
HNGCF09	527972	4040	2 - 100	13792		S0052: 2
HNGCF28	574397	4041	3 - 113	13793	His-1 to Asn-7.	S0052: 2
HNGCG83	868075	4042	236 - 403	13794		S0052: 2
HNGCH05	932404	4043	183 - 335	13795	Leu-1 to Asn-6, Ser-23 to Glu-28, Ser-36 to Gln-44.	H0063: 1, S0052: 1, L0748: 1, L0745: 1 and L0749: 1.
HNGCI02	920722	4044	14 - 214	13796	Thr-37 to Pro-44.	S0052: 1 and S0428: 1.

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HNGCI11	967513	4045	2 - 223	13797	Phe-20 to Leu-26.	S0052: 1 and S0053: 1.
HNGCI17	526807	4046	56 - 226	13798	Leu-1 to Ser-7.	S0052: 2
HNGCI53	825377	4047	61 - 270	13799	Gly-18 to Ala-23, Pro-31 to Leu-41, Pro-57 to Glu-67.	S0052: 2
HNGCI69	574456	4048	3 - 278	13800	Thr-68 to Thr-81.	S0052: 2
HNGCK34	706561	4049	78 - 206	13801	Pro-21 to Ser-31.	S0052: 1 and S0053: 1.
HNGCK82	796479	4050	38 - 142	13802	Asn-1 to Thr-6.	S0052: 2
HNGCK93	574458	4051	151 - 276	13803		S0052: 2
HNGCL31	571332	4052	154 - 408	13804	Ser-6 to Pro-12, Ser-22 to Lys-30.	S0052: 2 and L0758: 1.
HNGCL55	574453	4053	3 - 167	13805	Phe-1 to Arg-11, Asp-34 to Asn-42.	S0052: 2
HNGCM05	932409	4054	2 - 139	13806	Glu-10 to Arg-15.	S0052: 1 and S0053: 1.
HNGCO37	708694	4055	101 - 409	13807	Phe-16 to Ser-39.	S0052: 2
HNGCO45	573055	4056	22 - 255	13808	Tyr-2 to Ser-8.	S0052: 2
HNGCO86	779203	4057	152 - 3	13809		S0052: 1 and S0428: 1.
HNGCQ37	708698	4058	1 - 258	13810	Gly-26 to Pro-32.	S0052: 2
HNGCU24	574339	4059	67 - 138	13811		S0052: 2
HNGCU70	574340	4060	3 - 155	13812	Val-1 to Glu-10, Pro-38 to Trp-43.	S0052: 2
HNGCW38	574463	4061	115 - 321	13813	Gln-19 to Pro-25.	S0052: 2 and S0428: 1.
HNGCW81	577253	4062	236 - 346	13814	Lys-7 to Gln-16.	L0766: 1, S0052: 1 and H0445: 1.
HNGCW82	574344	4063	134 - 307	13815	Lys-1 to Ser-14, Lys-38 to Tyr-43.	S0052: 2
HNGCW83	574338	4064	3 - 113	13816	Arg-1 to Gly-7, Val-9 to Gly-17.	S0052: 2
HNGCX07	953900	4065	3 - 287	13817	Lys-55 to Glu-63.	S0052: 2
HNGCY37	952203	4066	81 - 428	13818	Lys-19 to Gly-28, Glu-37 to Gly-57, Ser-81 to His-99.	S0052: 1 and S0428: 1.
HNGCY41	806055	4067	36 - 143	13819		S0052: 1 and S0428: 1.
HNGCY43	574392	4068	1 - 258	13820	Lys-17 to Lys-23, Glu-40 to Trp-46.	S0052: 2

HNGCY59	959967	4069	112 - 297	13821	Lys-8 to Gly-18, Ser-31 to Asp-50, Pro-55 to Gly-60.	L0766: 3, S0052: 2, L0598: 1, L0659: 1 and L0759: 1.
HNGCZ13	660916	4070	34 - 240	13822	His-4 to Glu-10, Lys-31 to Ala-37.	S0052: 2
HNGDA09	574454	4071	1 - 156	13823	Ser-1 to Arg-20, Pro-32 to Phe-38.	S0052: 2
HNGDA56	574452	4072	18 - 260	13824	Pro-1 to Thr-10, Pro-17 to Pro-23.	S0052: 2
HNGDB25	784836	4073	96 - 296	13825	His-48 to Thr-53, Pro-55 to Gln-61.	S0052: 1 and S0428: 1.
HNGDB65	526852	4074	81 - 260	13826		S0052: 2
HNGDD30	573021	4075	94 - 273	13827	Leu-16 to Asn-22.	S0052: 2
HNGDD39	709270	4076	9 - 164	13828		S0052: 2
HNGDD73	764596	4077	264 - 464	13829		S0052: 2
HNGDE07	953858	4078	2 - 133	13830	Arg-5 to Gly-10, Val-17 to Trp-29, Arg-31 to Val-36.	S0052: 2
HNGDE31	794124	4079	125 - 244	13831		H0580: 1 and S0052: 1.
HNGDF48	723368	4080	3 - 161	13832	Gly-16 to Pro-22.	S0052: 2
HNGDF72	766217	4081	135 - 269	13833	Arg-35 to Pro-40.	S0052: 2
HNGDG86	577237	4082	59 - 259	13834	Thr-1 to Phe-8, Cys-12 to Gln-17.	S0052: 2
HNGDH09	573022	4083	118 - 264	13835		S0052: 2
HNGDH37	917254	4084	70 - 183	13836		S0052: 2
HNGDH52	914629	4085	3 - 242	13837	Gln-26 to Trp-41.	H0556: 1, H0650: 1, H0250: 1 and S0052: 1.
HNGDH96	573060	4086	77 - 265	13838	Cys-48 to Asn-58.	S0052: 2 and S0428: 1.
HNGDK17	860684	4087	3 - 365	13839	His-1 to Gly-16.	S0052: 2
HNGDK41	574559	4088	223 - 387	13840	Ser-11 to Asn-21, Pro-23 to Met-32.	S0052: 2
HNGDL32	935842	4089	61 - 369	13841	Ser-1 to Leu-7, Ser-26 to Tyr-35.	S0052: 2
HNGDL72	574451	4090	1 - 66	13842		S0052: 2
HNGDL93	927582	4091	46 - 108	13843		S0052: 2

HNGDO17	973285	4092	240 - 629	13844	Gly-23 to Pro-31, His-40 to Met-55.	H0416: 1 and S0052: 1.
HNGDP10	968221	4093	2 - 178	13845		S0052: 2
HNGDP13	574484	4094	2 - 121	13846	Ala-1 to Tyr-7, Pro-17 to Asn-25.	S0052: 2
HNGDP27	574482	4095	278 - 445	13847		S0052: 2 and L0666: 1.
HNGDP29	574488	4096	150 - 413	13848	Pro-16 to Gln-22.	S0052: 2
HNGDP30	574480	4097	195 - 365	13849	Met-35 to His-42.	S0052: 2
HNGDP71	574481	4098	157 - 360	13850		S0052: 2
HNGDP74	860669	4099	51 - 500	13851		S0052: 2
HNGDP89	574478	4100	133 - 261	13852		S0052: 2
HNGDP95	574477	4101	2 - 190	13853	Gly-2 to Phe-10, Pro-29 to Ser-34.	S0052: 2
HNGDR19	953672	4102	65 - 388	13854	Glu-11 to Ala-16, Pro-34 to Ser-41, Leu-74 to Thr-80.	S0052: 2
HNGDR42	657404	4103	53 - 181	13855	Ser-2 to Ser-9, Thr-26 to Cys-36.	S0052: 2
HNGDR79	572904	4104	92 - 262	13856		S0052: 2
HNGDR81	572901	4105	2 - 124	13857		S0052: 2
HNGDR88	860666	4106	198 - 323	13858	Asn-8 to Met-14.	S0052: 2
HNGDS04	572909	4107	3 - 263	13859	His-1 to Pro-8, Glu-16 to Pro-42, Phe-63 to Lys-76, Pro-78 to Asp-87.	S0052: 2
HNGDS59	576763	4108	28 - 114	13860	Gln-19 to Gly-24.	S0052: 5
HNGDS96	796488	4109	1 - 408	13861	Arg-23 to Tyr-29, Gly-36 to Gly-43.	S0052: 1 and S0428: 1.
HNGDT36	572895	4110	3 - 290	13862	His-1 to His-6, Arg-21 to Trp-30, Glu-40 to Ala-56, Thr-83 to Trp-89.	S0052: 2
HNGDU45	722062	4111	16 - 372	13863	Pro-22 to Thr-28, Gly-35 to Cys-43.	S0052: 1 and S0053: 1.
HNGDV22	572910	4112	41 - 280	13864		S0052: 2
HNGDV25	573152	4113	128 - 259	13865		H0341: 1 and S0052: 1.

HNGDV59	739407	4114	112 - 2	13866	Pro-2 to Ser-10, Ser-16 to His-21.	S0052: 2
HNGDV96	796487	4115	192 - 446	13867		S0052: 1 and S0428: 1.
HNGDW23	576773	4116	3 - 221	13868	Gly-9 to Arg-19, Thr-23 to Trp-31, Pro-37 to Arg-44, Lys-53 to Gly-59, Arg-65 to Ala-73.	S0052: 2
HNGDW62	573162	4117	80 - 274	13869		S0052: 2
HNGDW95	661943	4118	267 - 425	13870	Thr-25 to Glu-31.	H0421: 1 and S0052: 1.
HNGDX50	860661	4119	23 - 142	13871	Thr-1 to Gly-18.	S0052: 2
HNGDY12	870390	4120	289 - 552	13872		S0134: 1 and S0052: 1.
HNGDY14	968042	4121	1 - 258	13873	Gln-7 to Thr-17.	S0052: 2
HNGDY39	572908	4122	218 - 409	13874	Arg-17 to Cys-24, Pro-39 to Met-44.	S0052: 2 and S0428: 1.
HNGDY92	920168	4123	3 - 212	13875	Lys-13 to Leu-26, Glu-61 to Arg-70.	S0052: 2
HNGDZ52	572865	4124	221 - 361	13876	Asp-1 to Ser-9.	S0052: 2
HNGEA44	572855	4125	2 - 118	13877		S0052: 2
HNGEA82	778879	4126	1 - 177	13878	Gly-10 to Arg-21, Val-28 to Lys-37, Pro-54 to Tyr-59.	S0052: 1 and S0053: 1.
HNGEA88	578911	4127	20 - 190	13879	Thr-23 to Leu-32.	S0052: 2
HNGEB79	576743	4128	2 - 220	13880	Pro-25 to Ala-33, Lys-42 to His-48.	S0052: 2
HNGEB81	572862	4129	12 - 242	13881	Ala-10 to Cys-16, Arg-33 to Trp-40.	S0052: 2
HNGEB91	924912	4130	123 - 338	13882		S0053: 3
HNGEC02	917530	4131	487 - 846	13883	Pro-7 to Gly-13, Gly-18 to Gly-38.	AR054: 9, AR051: 4, AR050: 0 H0556: 1 and S0052: 1.
HNGEC06	935840	4132	2 - 157	13884	Ala-1 to Tyr-8.	S0052: 2
HNGEC41	782294	4133	11 - 217	13885		S0052: 1 and S0216: 1.
HNGEC43	573040	4134	258 - 374	13886	Gln-1 to Thr-7.	S0052: 2
HNGEC44	806031	4135	162 - 359	13887		S0052: 1 and S0428: 1.
HNGEC75	916809	4136	199 - 597	13888	Arg-1 to Trp-11,	S0053: 2, H0439: 1, L0809:

Clone					Amino acid	Code
HNGED03	924696	4137	2 – 259	13889	Pro-19 to Ser-33.	1, S0052: 1 and L0758: 1.
HNGED21	920156	4138	3 – 194	13890	Ala-1 to Arg-9, Ala-22 to Gln-33.	S0052: 1 and S0428: 1.
HNGED77	572868	4139	95 – 277	13891	Asp-29 to Gln-42.	S0052: 2
HNGED91	790309	4140	3 – 287	13892	His-7 to Ser-12.	S0052: 2
HNGEE18	573018	4141	1 – 207	13893	Val-16 to His-21, Ser-49 to Cys-59.	S0052: 1 and S0428: 1.
HNGEE39	573065	4142	1 – 306	13894	Pro-5 to Asn-10, Trp-24 to Ser-29, Met-58 to Arg-65, Ala-67 to Gly-72, Glu-78 to Glu-86.	S0052: 4
HNGEF58	708692	4143	12 – 305	13895	Thr-37 to Gly-42.	S0052: 2
HNGEG45	572880	4144	22 – 168	13896		S0052: 2
HNGEG74	860685	4145	200 – 418	13897		S0052: 2
HNGEG85	784431	4146	77 – 223	13898	Thr-20 to Tyr-26.	S0428: 2 and S0052: 1.
HNGEG86	573049	4147	2 – 172	13899		S0052: 2
HNGEI22	967310	4148	2 – 241	13900	Arg-2 to Lys-23, Gly-34 to Gly-45, Tyr-64 to Lys-69.	S0052: 2
HNGEI47	720471	4149	142 – 453	13901		S0052: 2
HNGEJ04	932199	4150	53 – 253	13902		S0052: 2
HNGEJ22	573066	4151	1 – 195	13903	Glu-1 to Thr-11, Gly-27 to Gly-34, Leu-46 to His-53.	S0052: 3
HNGEJ35	934987	4152	263 – 490	13904		H0318: 1 and S0052: 1.
HNGEK30	572864	4153	47 – 202	13905	Lys-13 to Leu-22, Thr-26 to Lys-33.	S0052: 2
HNGEK44	576745	4154	1 – 291	13906	Gly-1 to Asn-8, Ala-23 to Ala-34, Ile-80 to Trp-87.	S0052: 3
HNGEK68	753159	4155	46 – 342	13907	Ser-1 to Lys-14, Gly-18 to His-30, Glu-35 to Lys-40.	S0052: 2
HNGEL62	958363	4156	1 – 333	13908		S0052: 1, S0428: 1 and

HNGEL92	572867	4157	152 - 373	13909		L0748: 1.		
HNGEM38	573041	4158	156 - 272	13910	Gln-1 to Ala-9, Cys-24 to Lys-31.	S0052: 2 and S0428: 1.		
HNGEM53	860643	4159	42 - 272	13911	Pro-27 to Gly-34, Ser-37 to Arg-42.	S0052: 2		
HNGEN37	663955	4160	2 - 259	13912	Asn-9 to Arg-14, Asn-21 to Leu-26.	AR089: 1, AR061: 0 S0052: 2		
HNGEN45	572876	4161	204 - 362	13913	Ser-15 to Thr-21.	S0052: 2		
HNGEP55	732262	4162	1 - 273	13914	Gln-32 to Asn-39, Arg-67 to Ser-73.	S0052: 2		
HNGEP61	576749	4163	2 - 226	13915	Gln-10 to Ala-20, Thr-36 to Gly-43, Arg-69 to Ile-74.	S0052: 2		
HNGEP64	860631	4164	338 - 75	13916	Val-1 to Lys-12.	H0306: 1, H0402: 1, H0305: 1 and S0052: 1.		
HNGEP70	572858	4165	31 - 108	13917	His-1 to Asp-7.	S0052: 2		
HNGEP75	766574	4166	113 - 268	13918		S0052: 1 and S0053: 1.		
HNGEP77	861710	4167	145 - 366	13919	Gly-1 to Gly-9, Glu-67 to Arg-73.	H0271: 1, S0052: 1 and L0439: 1.		
HNGEP81	778161	4168	566 - 880	13920		S0052: 1, S0216: 1 and H0445: 1.		
HNGEQ07	953647	4169	44 - 349	13921	Ala-15 to Phe-23, Glu-35 to Gly-41.	S0052: 1 and S0216: 1.		
HNGEQ32	572984	4170	3 - 278	13922	Thr-7 to Gly-13.	H0341: 1, L0769: 1, L0789: 1, L0791: 1, S0052: 1 and L0777: 1.		
HNGEQ67	860687	4171	73 - 270	13923		S0052: 2 and S0428: 1.		
HNGER25	572873	4172	2 - 97	13924		S0052: 2		
HNGER43	699391	4173	97 - 204	13925		AR061: 3, AR089: 2 S0052: 3		
HNGER67	578903	4174	337 - 507	13926		S0052: 2		
HNGER82	945838	4175	226 - 546	13927	Asn-1 to Gly-6, Gln-23 to Gly-29.	AR061: 1, AR089: 1 L0748: 5, H0444: 2, H0402: 1, L0367: 1 and S0052: 1.	2p22-p21	120435, 120435,
HNGER84	586451	4176	116 - 319	13928		S0052: 2		

HNGER96	922996	4177	3 - 362		13929	S0052: 1 and S0428: 1.		126600, 135300, 152790, 157170, 182601, 278300, 601071, 601771, 602134
HNGES56	733543	4178	2 - 265		13930	S0114: 1 and S0052: 1.		
HNGES59	490034	4179	381 - 524	Ala-7 to Thr-12, Pro-37 to Gly-44.	13931	S0114: 1, S0052: 1 and H0444: 1.		
HNGES89	573013	4180	1 - 240	Glu-8 to Gln-15.	13932	S0052: 2		
HNGET07	953618	4181	190 - 324		13933	S0052: 2		
HNGET31	506498	4182	67 - 219		13934	S0052: 2		
HNGET67	953529	4183	49 - 219	Gln-11 to Cys-17, Phe-26 to Gly-34, Ala-45 to Phe-53.	13935	S0052: 8		
HNGEU35	853582	4184	396 - 695	Pro-29 to Thr-34, Ser-59 to Thr-66.	13936	S0052: 2 and H0063: 1.		
HNGEU37	860626	4185	146 - 15		13937	S0052: 2		
HNGEV33	781207	4186	48 - 404		13938	S0052: 3		
HNGEV34	490914	4187	373 - 486		13939	H0255: 2 and S0052: 1.		
	537746	9583	468 - 620	Lys-1 to Gly-9.	19335			
HNGEV38	572882	4188	3 - 326	His-1 to Arg-7, Arg-78 to Leu-83, Cys-87 to Gly-99.	13940	S0052: 2		
HNGEV40	572894	4189	110 - 316		13941	S0052: 3		
HNGEV53	573090	4190	65 - 211		13942	S0052: 2		
HNGEV59	576750	4191	186 - 317		13943	S0052: 2		
HNGEV65	750391	4192	390 - 599	Ile-54 to Gln-70.	13944	L0748: 2, S0218: 1, S0052: 1, L0746: 1, L0749: 1 and L0608: 1.		
HNGEV70	573089	4193	1 - 141		13945	S0052: 2		
HNGEV75	506312	4194	103 - 258	Arg-14 to Asp-23.	13946	S0052: 2		
HNGEV86	789128	4195	2 - 103	Thr-9 to Lys-15.	13947	S0052: 1 and S0053: 1.		
HNGEV88	750542	4196	149 - 340		13948	S0052: 2	4p16	225500, 600593, 602363

HNGEW18	958328	4197	14 - 136	13949	Ser-11 to Tyr-16.	S0052: 1 and S0428: 1.
HNGEW76	572874	4198	104 - 274	13950	Ile-44 to His-52.	S0052: 2
HNGEX06	935838	4199	147 - 323	13951	Thr-1 to Phe-7, Ile-39 to Asn-45.	S0052: 3 and S0428: 1.
HNGEX35	959230	4200	14 - 376	13952		S0052: 2
HNGEX76	834919	4201	59 - 337	13953		H0179: 1 and S0052: 1.
HNGEX95	572897	4202	124 - 327	13954		S0052: 2
HNGEY41	973310	4203	123 - 293	13955		S0052: 2
HNGEY50	676067	4204	2 - 154	13956		S0052: 2
HNGEY60	920375	4205	1 - 171	13957	Val-21 to Gly-33, Glu-45 to Gly-50.	S0052: 2
HNGEY80	790222	4206	256 - 426	13958	Ser-22 to Trp-31.	S0052: 2
HNGEY84	752239	4207	188 - 481	13959	Glu-7 to Asn-15.	H0179: 1 and S0052: 1.
HNGEZ45	574462	4208	79 - 333	13960	Glu-1 to Gln-18, Lys-46 to Lys-53.	S0052: 3
HNGFA28	774277	4209	248 - 679	13961		S0052: 1 and S0216: 1.
HNGFA39	424813	4210	41 - 478	13962	Thr-17 to Gly-30, Gly-32 to Val-38.	S0052: 2
HNGFA41	952235	4211	148 - 2	13963		S0052: 1 and S0428: 1.
HNGFA67	576719	4212	151 - 318	13964		S0052: 2
HNGFA80	963490	4213	65 - 349	13965		S0052: 1 and S0428: 1.
HNGFB08	959738	4214	3 - 131	13966		S0052: 2
HNGFB52	573575	4215	1 - 339	13967	Gly-1 to Ala-15, Ala-17 to Ser-25, Pro-32 to Arg-44, Pro-55 to His-60.	H0305: 2 and S0052: 1.
HNGFB57	868072	4216	129 - 263	13968	Pro-14 to Ser-21.	S0052: 2
HNGFB74	573024	4217	2 - 136	13969	Pro-2 to Thr-11, Lys-22 to Leu-27.	S0052: 2
HNGFC71	573160	4218	3 - 167	13970	Glu-25 to Trp-33, Leu-49 to Arg-55.	S0052: 1 and S0053: 1.
HNGFD63	835997	4219	54 - 470	13971	Pro-10 to Ser-19, Ser-29 to Leu-47, Ala-60 to Gly-66.	S0052: 1 and S0053: 1.
HNGFD75	823462	4220	1 - 366	13972		S0052: 2

HNGFD85	783467	4221	118 - 351	13973	Lys-7 to Thr-20, Ser-28 to Gly-43.	S0052: 1 and S0428: 1.
HNGFD96	968248	4222	40 - 285	13974		S0052: 2, L0742: 2 and L0592: 1.
HNGFF35	805996	4223	194 - 451	13975	Pro-1 to Asn-10, Arg-23 to Cys-29.	S0052: 1 and S0428: 1.
HNGFG22	573084	4224	91 - 261	13976	Gly-25 to Ser-35, Ser-44 to Val-49, Ser-51 to Asp-57.	AR061: 8, AR089: 3 S0052: 2
HNGFG51	725787	4225	45 - 200	13977		H0305: 2 and S0052: 1.
HNGFG57	860595	4226	40 - 339	13978	Arg-1 to Lys-8, Arg-60 to Trp-66, Leu-68 to Ile-74, Glu-82 to Gly-89.	S0052: 2 and L0748: 1.
HNGFG69	926873	4227	1 - 315	13979	Pro-6 to Ser-13, Arg-19 to Gln-35, Thr-54 to Ala-61, His-73 to Cys-78.	S0052: 1 and S0428: 1.
HNGFH94	966118	4228	262 - 393	13980	Lys-1 to Arg-15, Pro-17 to Asp-23, Pro-38 to Lys-44.	S0052: 1 and S0428: 1.
HNGFI06	935828	4229	240 - 371	13981		S0052: 1 and S0428: 1.
HNGFI20	578896	4230	90 - 332	13982	Gly-20 to Lys-26, Pro-40 to Lys-47.	S0052: 2
HNGFI32	699398	4231	224 - 346	13983		H0255: 1 and S0052: 1.
HNGFI81	578892	4232	202 - 381	13984		S0052: 2
HNGFJ27	860591	4233	78 - 272	13985		S0002: 1 and S0052: 1.
HNGFK28	544726	4234	1 - 756	13986	Glu-4 to Asn-15, Ser-104 to Gly-111, Leu-230 to Pro-237.	AR061: 6, AR089: 2 S0052: 3
	566798	9584	1 - 756	19336	Glu-4 to Asn-15, Ser-104 to Gly-111, Leu-230 to Pro-237.	
	943114	9585	351 - 1	19337	Gln-1 to Ile-15, Leu-76 to Arg-82, Glu-90 to Thr-96.	

HNGFK44	943115	9586	3 - 530	19338	Glu-6 to Asn-17, Ser-106 to Gly-113.	S0052: 2
HNGFL04	860589	4235	46 - 177	13987	Ser-4 to Thr-12, Thr-23 to Thr-30.	S0052: 2
HNGFM50	572833	4236	1 - 153	13988	Thr-2 to Arg-11, Asp-30 to Gly-35.	S0052: 2
HNGFM74	584729	4237	1 - 324	13989	Glu-19 to Pro-24, Ser-49 to Thr-54.	H0583: 1, H0402: 1 and S0052: 1.
HNGFM79	578884	4238	471 - 310	13990	Pro-35 to Ser-40, Thr-64 to Ser-70.	S0052: 2
HNGFN21	860585	4239	1 - 300	13991	Ser-12 to Thr-19, Pro-58 to Gln-65.	S0052: 3, H0556: 1 and L0777: 1.
HNGFN56	572821	4240	2 - 205	13992		S0052: 3
HNGFN65	970740	4241	167 - 349	13993	Gln-21 to Gly-29, Pro-39 to Asn-44.	S0052: 2
HNGFN96	576698	4242	1 - 285	13994		S0052: 2
HNGFO46	770209	4243	170 - 295	13995	Pro-1 to Gly-6.	H0580: 2 and S0052: 1.
HNGFO55	935135	4244	3 - 215	13996	Lys-16 to Arg-21, Leu-30 to Pro-35, Asn-48 to Gly-53, Ala-68 to Ser-78.	S0052: 2
	572856	4245	3 - 266	13997		
HNGFO81	526792	4246	69 - 263	13998	Pro-48 to Gly-55.	AR061: 2, AR089: 0 S0052: 2
HNGFP02	920483	4247	11 - 205	13999	Lys-25 to Glu-36.	S0052: 2
HNGFP08	959730	4248	2 - 376	14000	Gln-34 to Gly-39, Lys-70 to Gly-80.	S0052: 2
HNGFP62	5773052	4249	42 - 302	14001		S0052: 1 and S0053: 1.
HNGFP80	931021	4250	109 - 372	14002		S0052: 2
HNGFP93	707332	4251	187 - 360	14003	Asn-1 to Gln-9.	S0052: 3
HNGFQ36	703715	4252	74 - 370	14004	His-1 to Gly-15.	H0580: 1 and S0052: 1.
HNGFQ58	576715	4253	109 - 279	14005	Thr-22 to Asp-28, Glu-43 to Gly-49.	S0052: 2 and H0583: 1.
HNGFR02	920482	4254	89 - 286	14006	Lys-8 to Lys-19, Glu-25 to Glu-34, Ala-38 to Gln-53.	S0052: 1 and S0428: 1.

HNGFR16	573358	4255	37 - 303		S0053: 2 and S0052: 1.
HNGFR48	860245	4256	178 - 450	Cys-41 to Ser-47.	S0052: 1, S0428: 1 and L0748: 1.
HNGFR73	646263	4257	268 - 405		S0052: 2 and H0063: 1.
HNGFR80	576713	4258	185 - 337	Pro-7 to Lys-20, Glu-45 to Cys-50.	S0052: 3
HNGFR85	572838	4259	151 - 240	Phe-17 to His-23.	S0052: 2
HNGFS46	573094	4260	3 - 209		S0052: 2
HNGFS58	932396	4261	2 - 313		S0052: 2
HNGFS71	572828	4262	132 - 341		S0052: 2
HNGFT19	671599	4263	2 - 214	Met-13 to Phe-23, Gln-29 to Trp-40, Arg-63 to Lys-71.	S0052: 1 and S0053: 1.
HNGFT77	772335	4264	113 - 328	Gly-1 to Glu-9.	S0052: 1 and S0216: 1.
HNGFU12	971170	4265	45 - 290		AR089: 4, AR061: 1 S0052: 1 and S0428: 1.
HNGFU28	860576	4266	82 - 189		S0052: 2
HNGFU40	559450	4267	2 - 367		S0052: 2
HNGFV03	924670	4268	2 - 211	Arg-16 to Thr-40.	S0052: 1 and S0428: 1.
HNGFV32	806047	4269	15 - 326		S0052: 1 and S0428: 1.
HNGFW09	924693	4270	218 - 340		S0052: 2
HNGFW15	578901	4271	3 - 200	Trp-8 to Ser-14.	S0052: 2
HNGFW31	578864	4272	149 - 331	Ile-1 to Asn-21, Lys-38 to Thr-43.	S0052: 2
HNGFW82	839957	4273	7 - 87	Ser-3 to Leu-10.	S0052: 2
HNGFW96	959715	4274	360 - 473		S0052: 3
HNGGA08	959637	4275	78 - 206	Ser-34 to Phe-41.	S0052: 2
HNGGA10	964820	4276	102 - 263		S0052: 2
HNGGA20	764502	4277	27 - 290	Leu-39 to Ile-46, Pro-48 to Pro-53.	H0250: 2 and S0052: 2.
HNGGA40	506337	4278	68 - 256	Thr-45 to Cys-53.	S0052: 2
HNGGA44	577362	4279	136 - 2		S0052: 2 and S0428: 1.
HNGGA53	576212	4280	154 - 348	Gly-56 to Ala-62.	S0052: 2
HNGGA90	572869	4281	1 - 210		S0052: 3
HNGGB09	881399	4282	217 - 294		S0052: 2

HNGGE10	964821	4283	28 - 171	14035		S0052: 2
HNGGE38	576217	4284	53 - 136	14036	Gly-8 to Arg-17.	S0052: 2 and S0428: 1.
HNGGF02	840277	4285	56 - 301	14037		S0052: 2
HNGGF03	924587	4286	165 - 383	14038		S0052: 2
HNGGF06	935709	4287	19 - 153	14039	Gly-18 to Thr-24, Pro-38 to Lys-45.	S0052: 2
HNGGF26	577369	4288	65 - 226	14040	Arg-15 to Leu-20.	S0052: 3
HNGGF57	576256	4289	131 - 319	14041	Arg-1 to Val-10, Ser-15 to Phe-24, Leu-46 to Lys-52.	S0052: 2
HNGGG02	920379	4290	2 - 298	14042	Pro-23 to Asn-28, Ser-43 to Gly-51, Gly-75 to Trp-86.	S0052: 2
HNGGG10	964818	4291	9 - 185	14043	Ser-7 to Asp-19, Trp-32 to Val-38, Lys-45 to Asp-53.	S0052: 4
HNGGG15	576294	4292	2 - 160	14044	Tyr-18 to Asn-23.	S0052: 2
HNGGG18	506304	4293	64 - 282	14045	Ala-27 to Gln-32.	S0052: 2
HNGGG22	576267	4294	124 - 276	14046	Gln-9 to Glu-14.	S0052: 2
HNGGG25	679153	4295	2 - 106	14047		S0052: 2
HNGGG26	576298	4296	2 - 283	14048	Asn-28 to Ser-35, Lys-50 to Pro-56.	S0052: 2
HNGGG50	576295	4297	135 - 296	14049		S0052: 2
HNGGG56	733510	4298	160 - 309	14050		S0052: 2
HNGGG63	576296	4299	127 - 378	14051	Gln-10 to Gln-18, Glu-25 to Val-30.	S0052: 2
HNGGF76	576231	4300	89 - 232	14052		S0052: 2
HNGGH38	582695	4301	1 - 156	14053	Gly-6 to Ala-14.	S0052: 2
HNGGH48	576705	4302	106 - 303	14054	Leu-9 to Cys-14, Ile-44 to Asp-50, Ser-56 to Leu-62.	S0052: 2
HNGGH57	576278	4303	3 - 143	14055	Lys-16 to His-21, Ala-32 to Tyr-37.	S0052: 2
HNGGH64	860426	4304	169 - 423	14056	Glu-19 to Gly-26, Gly-41 to Thr-47, Ser-79 to Glu-85.	S0052: 2

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HNGGH74	577192	4305	164 - 346	14057		S0052: 2
HNGGH78	924908	4306	159 - 431	14058	Lys-19 to Arg-26.	S0052: 2
HNGGH95	576214	4307	36 - 344	14059		S0052: 3
HNGGI08	959639	4308	3 - 158	14060	Asn-11 to Gly-18, Glu-28 to Gly-35.	S0052: 2
HNGGI52	576270	4309	1 - 168	14061	Arg-14 to Arg-19.	S0052: 3
HNGGI58	825371	4310	1 - 117	14062		S0052: 2
HNGGI81	830081	4311	155 - 286	14063		S0052: 3 and L0600: 2.
HNGGK31	576259	4312	72 - 1	14064	Lys-1 to Lys-7.	S0052: 2
HNGGK53	576253	4313	2 - 202	14065	Lys-20 to Trp-27.	S0052: 2
HNGGK86	576247	4314	102 - 269	14066		S0052: 2
HNGGK94	576255	4315	69 - 179	14067	Ser-1 to Tyr-7.	S0052: 2
HNGGL51	576758	4316	48 - 260	14068	Gln-29 to Lys-35, Lys-46 to Arg-52, Ser-58 to Ser-63.	S0052: 2
HNGGM10	964819	4317	175 - 582	14069	Lys-1 to Asn-8.	S0052: 1 and S0428: 1.
HNGGM41	576284	4318	137 - 316	14070	Ser-22 to Arg-28.	S0052: 2
HNGGM56	576219	4319	1 - 150	14071	Asn-9 to Trp-16, Ala-20 to Phe-31, Lys-39 to Gly-45.	S0052: 2
HNGGM67	576220	4320	189 - 380	14072	Arg-29 to Trp-34.	S0052: 2
HNGGM76	576287	4321	2 - 298	14073	Ser-19 to Ser-24.	S0052: 2
HNGGM92	576229	4322	85 - 309	14074		S0052: 2
HNGGN03	924578	4323	1 - 294	14075	Pro-22 to Thr-28, Pro-63 to Arg-70.	S0052: 2
HNGGN04	576263	4324	2 - 238	14076		S0052: 2
HNGGN16	576268	4325	43 - 255	14077	Pro-8 to Gly-18.	S0052: 2
HNGGN36	708119	4326	2 - 211	14078	His-14 to Trp-27.	S0052: 2
HNGGN64	577319	4327	1 - 123	14079		S0052: 2
HNGGN94	967253	4328	14 - 127	14080	Gly-20 to Glu-28.	S0052: 2
HNGGO01	916754	4329	155 - 340	14081	Lys-30 to Thr-36.	S0052: 2
HNGGO14	860246	4330	164 - 328	14082	Phe-40 to Gln-48.	S0052: 1 and S0428: 1.
HNGGO25	576277	4331	2 - 163	14083		S0052: 2
HNGGQ31	576238	4332	1 - 132	14084	Gly-1 to Gln-8, Ser-16 to Arg-21.	S0052: 2

HNGGQ41	712426	4333	257 - 475	14085	Trp-1 to Gly-7.	L0748: 4, S0052: 1 and S0428: 1.
HNGGQ65	576249	4334	1 - 147	14086		S0052: 2
HNGGQ89	577327	4335	56 - 337	14087	Arg-10 to Pro-18, Pro-38 to Asp-53.	S0052: 2 and S0428: 2.
HNGGR01	916753	4336	167 - 364	14088	Leu-49 to Asn-54.	L0748: 3, L0766: 1, S0052: 1, L0751: 1 and H0445: 1.
HNGGR10	964815	4337	121 - 255	14089		S0052: 3
HNGGR17	576250	4338	44 - 229	14090		S0052: 2
HNGGR43	576246	4339	214 - 447	14091	Gly-14 to His-23, Trp-40 to Ser-53.	S0052: 2
HNGGR74	765698	4340	8 - 82	14092		AR089: 1, AR061: 0 S0052: 3
HNGGS09	970861	4341	1 - 156	14093	Pro-4 to Gly-14.	S0052: 6
HNGGS26	825369	4342	54 - 353	14094	Tyr-1 to Asp-6, Thr-13 to Val-27.	S0052: 2
HNGGS33	576305	4343	217 - 423	14095	Glu-8 to Glu-14, Thr-40 to Asn-53.	S0052: 2
HNGGS41	576308	4344	3 - 77	14096		S0052: 2
HNGGS66	576312	4345	64 - 192	14097	Pro-11 to Pro-16, Arg-34 to Glu-39.	S0052: 2
HNGGS67	751781	4346	2 - 112	14098		S0052: 3
HNGGS73	576740	4347	57 - 200	14099	Ser-16 to Ser-26.	S0052: 3
HNGGS78	576311	4348	1 - 183	14100	Gly-1 to Asn-25.	S0052: 2
HNGGT44	576297	4349	143 - 325	14101		S0052: 2
HNGGT46	719127	4350	46 - 288	14102		S0052: 2
HNGGT55	576302	4351	75 - 314	14103	Cys-11 to Ser-17.	S0052: 2
HNGGT57	576301	4352	1 - 249	14104		S0052: 2
HNGGT58	576299	4353	2 - 376	14105	Tyr-12 to Gln-22.	S0052: 4
HNGGT62	725750	4354	3 - 110	14106	Pro-10 to Cys-16, Pro-27 to Asn-33.	S0052: 2
HNGGV07	953549	4355	54 - 194	14107		S0052: 2
HNGGV55	576313	4356	1 - 300	14108	Pro-7 to Val-16, Ala-42 to Gly-47, Tyr-72 to Pro-82.	S0052: 2

HNGGV70	781247	4357	178 - 363	14109	Tyr-4 to Ser-11.	S0052: 2, H0521: 1 and H0543: 1.
HNGGV95	795920	4358	216 - 437	14110	Pro-7 to Arg-14.	S0052: 2
HNGGX46	868071	4359	3 - 278	14111		S0052: 2
HNGGX49	860551	4360	128 - 331	14112		S0052: 2
HNGGX91	576188	4361	71 - 274	14113		S0052: 2
HNGGX93	576193	4362	1 - 276	14114	Pro-2 to Leu-7, Pro-25 to Cys-30, Gly-42 to Glu-49.	S0052: 2
HNGGX95	576222	4363	2 - 292	14115		S0052: 2
HNGHA08	953539	4364.	2 - 229	14116	Lys-38 to Arg-43, Thr-70 to Ser-75.	S0052: 2
HNGHA10	860553	4365	243 - 467	14117	Arg-37 to Thr-48.	S0052: 1 and S0428: 1.
HNGHA47	576213	4366	2 - 295	14118	Cys-20 to Ser-31, Arg-50 to Ser-58.	S0052: 2
HNGHA70	576300	4367	161 - 292	14119	Ser-22 to Ala-30, Val-34 to Trp-41.	S0052: 2
HNGHA77	772279	4368	2 - 217	14120	Ala-15 to Leu-20, His-26 to Leu-33, Cys-35 to Thr-46.	S0052: 2
HNGHB07	860552	4369	73 - 384	14121	Arg-21 to Asn-26.	S0052: 2
HNGHB31	576306	4370	17 - 322	14122	Pro-22 to Ser-29, Thr-51 to Gly-61, Gly-76 to His-87.	S0052: 2
HNGHB33	506261	4371	15 - 92	14123	Gly-13 to Pro-22.	S0052: 2
HNGHB48	463007	4372	306 - 548	14124		S0052: 3
HNGHB55	733509	4373	308 - 475	14125	Asn-6 to Thr-19.	S0052: 4
HNGHB80	576769	4374	1 - 306	14126	Gly-1 to Gly-6.	S0052: 2
HNGHB91	576215	4375	158 - 529	14127	Asn-69 to Glu-81, Lys-104 to Ser-110.	S0052: 2
HNGHD04	932099	4376	1 - 339	14128	Ala-102 to Pro-107.	S0052: 2
HNGHD09	860544	4377	29 - 211	14129	Glu-2 to Pro-14, Ala-29 to Thr-38, Glu-45 to Gly-51.	S0052: 2
HNGHD22	576314	4378	26 - 223	14130	Pro-14 to Cys-20, Asn-22 to Leu-31.	S0052: 2

HNGHD25	506262	4379	61 - 318	14131	Phe-1 to Ser-6, Gln-8 to Glu-20, Leu-54 to Ala-60.	S0052: 2
HNGHD59	836226	4380	82 - 357	14132		S0052: 2
HNGHD67	576317	4381	321 - 443	14133		S0052: 3
HNGHE07	953540	4382	71 - 184	14134	Arg-24 to Gly-29.	S0052: 2
HNGHE17	576209	4383	64 - 180	14135		S0052: 3
HNGHE52	576197	4384	41 - 280	14136		S0052: 2
HNGHE56	577124	4385	169 - 357	14137	Pro-7 to Gly-14, Pro-28 to Gln-34.	S0052: 2
HNGHE62	576202	4386	31 - 279	14138		S0052: 2
HNGHE69	753107	4387	232 - 516	14139	Gly-21 to Ile-32, Lys-34 to Trp-41.	S0052: 2
HNGHE95	779951	4388	2 - 157	14140		S0052: 5
HNGHG15	971736	4389	1 - 177	14141	Gly-1 to Ser-12, Pro-21 to Ser-27.	S0052: 2
HNGHG22	577414	4390	129 - 263	14142	Lys-7 to Gly-14, Phe-26 to Gly-33.	S0052: 2
HNGHG56	576230	4391	147 - 260	14143	Pro-11 to Gly-16.	S0052: 2
HNGHG68	576232	4392	216 - 344	14144	Gly-2 to Pro-11, Ala-27 to Leu-36, Pro-38 to Trp-43.	S0052: 2
HNGHG71	576218	4393	1 - 183	14145	Gly-1 to Gly-9, Tyr-14 to Ser-20.	S0052: 2
HNGHJ26	924570	4394	1 - 384	14146	Gly-1 to Lys-6, Leu-10 to Pro-20.	S0052: 2
HNGHK13	577354	4395	130 - 348	14147	Lys-1 to Glu-35.	S0052: 2 and S0428: 1.
HNGHK42	582685	4396	26 - 211	14148		S0052: 2
HNGHK44	576208	4397	39 - 164	14149		S0052: 2
HNGHK46	576205	4398	39 - 173	14150	Gln-26 to Arg-34, Glu-40 to Arg-45.	S0052: 2
HNGHK48	576206	4399	182 - 319	14151		S0052: 2
HNGHK50	576195	4400	230 - 376	14152	Asp-1 to Lys-13.	S0052: 2
HNGHK53	576191	4401	3 - 143	14153	His-1 to Leu-6, Gln-23 to Thr-42.	S0052: 2

HNGHK68	576207	4402	2 - 205	14154	Ala-1 to Asn-20.	S0052: 3
HNGHK77	772277	4403	144 - 494	14155	Lys-11 to Thr-23, Gln-40 to Ile-47.	S0052: 1 and S0428: 1.
HNGHL10	964814	4404	3 - 242	14156	Gln-45 to Leu-76.	S0052: 2
HNGHL20	973969	4405	108 - 410	14157	Arg-2 to Gly-20, Pro-23 to Pro-33, Trp-41 to Gly-48, Cys-74 to Ser-79, Asn-84 to Gly-89.	S0052: 2
HNGHL22	576326	4406	160 - 246	14158	Lys-17 to Arg-24.	S0052: 3, L0752: 2, S0114: 1, L0662: 1 and L0547: 1.
HNGHL51	576223	4407	232 - 2	14159		S0052: 2
HNGHL52	576226	4408	38 - 358	14160		S0052: 2
HNGHL65	576320	4409	2 - 187	14161		S0052: 2
HNGHL76	506269	4410	1 - 159	14162		S0052: 3
HNGHL77	772283	4411	163 - 306	14163		S0052: 2
HNGHM33	576741	4412	67 - 315	14164	Ser-1 to Asp-10, Asn-29 to Ser-34, Gln-60 to Lys-77.	S0052: 2
HNGHM36	576325	4413	2 - 244	14165	Pro-14 to Arg-20.	S0052: 2
HNGHM51	713805	4414	3 - 281	14166	Thr-47 to Gly-56, Thr-71 to Ser-77, Arg-85 to Arg-90.	S0052: 2
HNGHN22	421742	4415	2 - 226	14167	Ala-69 to Ser-75.	S0052: 2
HNGHN40	576165	4416	70 - 255	14168	Arg-1 to Gln-21.	S0052: 2
HNGHN42	576111	4417	16 - 249	14169	Asp-19 to Leu-30.	S0052: 2
HNGHN52	576681	4418	61 - 354	14170		S0052: 2
HNGHN56	733881	4419	198 - 428	14171	Thr-31 to Phe-43.	S0052: 2
HNGHN70	576108	4420	91 - 297	14172		S0052: 2
HNGHN75	576110	4421	22 - 237	14173	Met-5 to Gln-19, Gly-21 to Leu-29.	S0052: 2
HNGHN76	576170	4422	2 - 232	14174		S0052: 2
HNGHN86	785566	4423	216 - 1	14175		S0052: 2
HNGHN93	506259	4424	110 - 283	14176	Pro-24 to Ser-29, Asn-32 to Ser-47, His-53 to Pro-58.	S0052: 3

HNGHN94	970856	4425	1 - 150	14177	Pro-26 to His-33, Pro-35 to Gly-48.	S0052: 2		
HNGHN95	576127	4426	175 - 438	14178	Ser-69 to Gly-75.	S0052: 2		
HNGHO02	920373	4427	40 - 246	14179		S0052: 2		
HNGHO10	964804	4428	118 - 318	14180	Pro-22 to Pro-28.	S0052: 2		
HNGHO15	576168	4429	1 - 192	14181	Gln-41 to Thr-55.	S0052: 3		
HNGHO26	420281	4430	74 - 241	14182		S0052: 2		
HNGHO28	576173	4431	79 - 375	14183	Arg-4 to Lys-11.	S0052: 3		
HNGHO32	575735	4432	148 - 333	14184		S0052: 2		
HNGHO36	576142	4433	26 - 328	14185	Lys-19 to Thr-27, Pro-79 to Ser-86.	S0052: 4		
HNGHO62	840278	4434	46 - 324	14186	Ser-19 to Met-25.	S0052: 2		
HNGHO66	576174	4435	125 - 349	14187	Ser-8 to Trp-14.	S0052: 2		
HNGHP28	576178	4436	93 - 245	14188	Pro-27 to Lys-32, Arg-43 to Ile-50.	S0052: 2		
HNGHP66	576136	4437	20 - 139	14189		S0052: 2		
HNGHP74	577357	4438	3 - 179	14190		S0052: 2		
HNGHP91	576053	4439	112 - 237	14191		S0052: 2		
HNGHP95	577335	4440	262 - 426	14192	Asp-22 to Thr-27.	S0052: 2		
HNGHQ27	683507	4441	156 - 272	14193		S0212: 1 and S0052: 1.		
HNGHQ43	576262	4442	51 - 188	14194	Pro-21 to Leu-28.	S0052: 2		
HNGHQ55	576144	4443	1 - 180	14195	Glu-18 to Arg-28.	S0052: 3		
HNGHQ72	576105	4444	1 - 276	14196	Leu-16 to Gly-23.	S0052: 3	22q11.21	123620, 151410, 600850
HNGHQ76	770126	4445	18 - 140	14197	Asn-14 to Lys-22.	S0052: 3		
HNGHQ96	723008	4446	1 - 273	14198	Lys-59 to Arg-64.	S0052: 2		
HNGHR04	576196	4447	210 - 434	14199	Ser-31 to Pro-36, Arg-44 to Arg-55.	S0052: 3		
HNGHR79	576199	4448	152 - 364	14200		S0052: 2		
HNGHR83	576210	4449	154 - 438	14201	His-1 to Cys-9, Gln-34 to Lys-46, Val-50 to Lys-62, Phe-64 to Lys-70.	S0052: 3		
HNGHT06	935706	4450	3 - 254	14202		S0052: 2		
HNGHT92	576149	4451	95 - 247	14203	Arg-18 to Gly-49.	S0052: 2		

HNGHY07	953531	4452	8 - 211	14204	Ile-9 to His-25.	S0052: 2
HNGHY31	577363	4453	304 - 438	14205	Ser-32 to Phe-37.	S0052: 3
HNGHY54	730769	4454	180 - 275	14206	Pro-7 to Asn-12.	H0318: 1 and S0052: 1.
HNGHY78	576139	4455	18 - 185	14207		S0052: 3
HNGHZ17	860532	4456	30 - 371	14208	Glu-17 to Ser-24.	S0052: 2 and H0656: 1.
HNGHZ48	576181	4457	3 - 149	14209		S0052: 2
HNGHZ51	716649	4458	1 - 147	14210	His-10 to Glu-16, Phe-18 to Asp-23.	S0052: 2
HNGIA19	576269	4459	117 - 323	14211		S0052: 2
HNGIA40	576155	4460	56 - 268	14212	Lys-39 to Pro-45.	S0052: 2
HNGIA66	678887	4461	89 - 265	14213	Trp-5 to Gly-18, Ser-29 to Ser-42.	S0052: 3 and S0428: 1.
HNGIC34	934280	4462	138 - 242	14214	Asn-23 to Lys-34.	S0052: 1 and S0428: 1.
HNGIC67	576177	4463	1 - 309	14215	Pro-28 to Ser-36.	S0052: 3
HNGID03	921946	4464	60 - 182	14216		S0052: 2 and S0053: 1.
HNGID11	967226	4465	127 - 351	14217		S0052: 2
HNGID15	660299	4466	1 - 444	14218	Pro-7 to Ser-12, Phe-90 to Glu-96.	S0052: 1 and S0053: 1.
HNGID16	576114	4467	112 - 264	14219	Val-1 to Trp-11.	S0052: 2
HNGID33	868069	4468	123 - 1	14220		S0052: 2
HNGID67	751668	4469	88 - 267	14221		S0052: 1 and S0053: 1.
HNGID78	576117	4470	34 - 399	14222	Leu-17 to Leu-24, Tyr-26 to Trp-39, Arg-47 to His-58, Ala-69 to Ile-76.	S0052: 2
HNGID80	576120	4471	66 - 200	14223	Lys-33 to Gly-40.	S0052: 2
HNGID89	577358	4472	54 - 203	14224	Pro-13 to Gln-22.	S0052: 2
HNGID91	577189	4473	221 - 361	14225	Arg-40 to Pro-46.	S0052: 1 and S0053: 1.
HNGIH02	920362	4474	2 - 97	14226		S0052: 2
HNGIH56	576122	4475	2 - 226	14227	Ala-1 to Ser-7.	S0052: 2
HNGIH94	576123	4476	3 - 152	14228	Thr-18 to Leu-23, Asp-42 to Cys-48.	S0052: 2
HNGII16	576154	4477	1 - 78	14229		S0052: 2
HNGII47	576156	4478	1 - 117	14230	Arg-21 to Pro-28, Lys-31 to Trp-37.	S0052: 2

HNGII50	915340	4479	3 - 158	14231	Asn-6 to Thr-16.	S0052: 2
HNGII74	576158	4480	149 - 367	14232	Trp-22 to Gly-28, Arg-46 to Ser-52.	S0052: 2
HNGII76	576153	4481	3 - 113	14233	Ser-30 to Gln-37.	S0052: 2
HNGII85	576102	4482	2 - 142	14234	Ala-1 to Ala-13, Val-17 to Ile-27.	S0052: 2 and S0053: 1.
HNGIJ01	916748	4483	67 - 168	14235	Ser-19 to Lys-26.	S0052: 1 and S0428: 1.
HNGIJ05	925597	4484	59 - 262	14236		S0052: 2
HNGIJ11	964809	4485	73 - 258	14237	Gln-16 to Asn-22.	S0052: 3
HNGIJ59	860526	4486	2 - 223	14238	Pro-5 to Ser-11, Lys-17 to Tyr-23.	S0052: 3
HNGIJ66	576224	4487	1 - 141	14239	Cys-13 to Ile-18.	S0052: 2
HNGIJ67	506355	4488	163 - 306	14240		S0052: 3
HNGIJ96	779901	4489	122 - 448	14241	Pro-10 to Pro-31.	S0052: 3
HNGIK41	712362	4490	132 - 218	14242		S0052: 3
HNGIK42	713817	4491	3 - 230	14243	His-1 to Arg-8, Gly-24 to Gly-38, Glu-41 to Trp-47.	S0052: 2
HNGIK77	772230	4492	3 - 149	14244	Ser-13 to Val-27.	S0052: 2
HNGIL27	839952	4493	291 - 434	14245	Lys-1 to Tyr-7, Arg-43 to Gln-48.	S0052: 1 and H0422: 1.
HNGIL43	715328	4494	168 - 332	14246	Leu-6 to Pro-11, Leu-16 to Trp-23, Lys-35 to Leu-42.	S0052: 2
HNGIM04	615308	4495	30 - 215	14247	Pro-41 to His-53.	H0083: 1 and S0052: 1.
HNGIM46	653221	4496	135 - 254	14248	Arg-1 to Leu-21.	S0052: 2
HNGIM76	770078	4497	2 - 268	14249		S0052: 2
HNGIM90	788715	4498	57 - 233	14250	Gln-19 to Ala-34, Ser-41 to Lys-48, Ser-53 to Lys-59.	S0052: 3
HNGIM92	783495	4499	55 - 216	14251	Tyr-1 to Lys-8, Phe-11 to Asp-16.	S0052: 1 and H0423: 1.
HNGIN11	964991	4500	219 - 521	14252		S0052: 1 and S0428: 1.
HNGIN18	666515	4501	3 - 254	14253	His-47 to Pro-52, Arg-58 to Gly-67.	S0052: 2

HNGIN28	860521	4502	123 - 290	14254	Gln-20 to Arg-25.	S0052: 1 and S0216: 1.
HNGIO15	660320	4503	159 - 404	14255	Glu-1 to Thr-8, Arg-15 to Asp-26.	S0052: 3
HNGIO77	576857	4504	253 - 378	14256		S0052: 2 and H0341: 1.
HNGIP30	577338	4505	3 - 242	14257	Glu-2 to Glu-18, Gly-50 to Ala-55.	S0052: 2, L0663: 1, S0053: 1 and H0445: 1.
HNGIP39	840215	4506	2 - 352	14258	Glu-52 to Ser-60.	S0052: 1 and S0428: 1.
HNGIP42	860518	4507	175 - 366	14259	Ile-42 to Gly-47.	S0052: 1 and S0428: 1.
HNGIP72	575752	4508	46 - 156	14260		S0052: 3
HNGIQ28	860510	4509	144 - 299	14261		S0052: 2
HNGIQ43	715324	4510	166 - 417	14262	Gly-15 to Arg-20.	S0052: 2
HNGIQ48	720944	4511	3 - 185	14263	His-1 to Glu-6, Gly-19 to Ser-24, Ile-28 to Pro-40.	S0052: 2
HNGIQ66	506352	4512	1 - 105	14264	Gly-1 to Lys-14.	S0052: 2
HNGIR34	719088	4513	236 - 349	14265		S0052: 2
HNGIR92	524799	4514	82 - 243	14266	Arg-24 to Tyr-34.	S0052: 2
HNGIS13	575753	4515	93 - 308	14267	His-11 to Ser-22, Leu-35 to Thr-41, Gln-45 to Gln-50.	S0052: 2
HNGIS30	575758	4516	59 - 202	14268		S0052: 2
HNGIT70	953890	4517	1 - 237	14269		S0052: 2
HNGIU55	576804	4518	1 - 171	14270	Asn-39 to His-45.	S0052: 1 and S0053: 1.
HNGIU78	666261	4519	799 - 578	14271	Leu-9 to Thr-14, Asn-69 to Glu-74.	L0803: 6, L0756: 5, L0731: 5, L0794: 3, L0755: 3, L0774: 2, L0805: 2, S0052: 2, L0746: 2, L0777: 2, L0598: 1, L0646: 1, L0766: 1, L0606: 1, L0661: 1, L0367: 1, L0666: 1, H0522: 1, L0742: 1, L0748: 1, L0740: 1, L0754: 1, L0745: 1, L0749: 1, L0779: 1, L0758: 1 and L0608: 1.
HNGIV01	913687	4520	116 - 310	14272		H0580: 1 and S0052: 1.
HNGIV24	766775	4521	1 - 210	14273		S0052: 1 and S0216: 1.

HNGIV81	777970	190 - 357	14274	Glu-19 to Thr-24, Thr-51 to Lys-56.	S0052: 1 and S0428: 1.		
HNGIW70	883086	131 - 577	14275	Lys-5 to Asn-10.	S0052: 2 and S0428: 1.		
HNGIW73	764456	63 - 290	14276	Gly-7 to Gln-12.	S0052: 1 and S0216: 1.		
HNGIY22	674660	37 - 171	14277		S0052: 2		
HNGIY36	707323	162 - 1	14278		S0052: 2		
HNGIY56	868065	3 - 149	14279		S0052: 2		
HNGIY60	740404	1 - 162	14280	Gly-1 to Lys-11, Gly-13 to Gly-25.	S0052: 2	8p23.1	
HNGIY79	775229	3 - 530	14281	Lys-31 to Gly-37, Pro-56 to Phe-65, Leu-77 to Asp-83, Pro-91 to Lys-97.	AR061: 10, AR089: 5 T0042: 1, S0052: 1, H0521: 1 and L0439: 1.		
HNGIY92	792737	35 - 334	14282	Thr-65 to Trp-80.	S0052: 1 and S0428: 1.		
HNGIZ36	670962	261 - 356	14283	Ser-27 to Tyr-32.	S0052: 2 and H0402: 1.		
HNGIZ56	733439	186 - 305	14284		S0052: 2		
HNGIZ69	757599	218 - 436	14285	Arg-15 to Asp-24.	S0052: 2		
HNGIZ82	668704	147 - 371	14286	Met-67 to Lys-72.	S0052: 3, L0809: 1 and L0789: 1.		
HNGJA15	787570	763 - 927	14287		S0052: 1 and S0216: 1.		
HNGJA18	666512	157 - 306	14288		S0052: 2		
HNGJB34	936011	257 - 436	14289	Arg-13 to Gly-18.	L0476: 1, S0052: 1 and S0053: 1.		
HNGJB52	724406	203 - 445	14290	Pro-2 to Arg-7.	S0052: 1 and S0053: 1.		
HNGJB68	753060	58 - 285	14291		S0052: 2		
HNGJC60	723380	183 - 416	14292	Val-2 to Gly-9, Gly-11 to Gly-24.	S0052: 2		
HNGJC66	786924	2 - 211	14293	Pro-9 to Leu-16, Ala-54 to Gly-62.	S0052: 2		
HNGJC76	739500	1 - 132	14294		S0052: 2		
HNGJD15	660312	1 - 93	14295		S0052: 2		
HNGJD61	774154	375 - 569	14296	His-22 to Leu-27, Pro-43 to Gly-64.	S0052: 1 and S0428: 1.		
HNGJD71	760397	24 - 371	14297	Ser-4 to Gly-10, Gly-36 to Asp-42,	S0052: 1 and S0428: 1.	19p13.3	108725, 120700, 133171, 136836,

Clone							
HNGJD76	670948	4546	20 - 259	14298	Leu-81 to Thr-91, Pro-93 to Gly-99, Ser-108 to Ala-114.	S0052: 2 and S0053: 1.	145981, 147141, 164953, 188070, 600957, 601238, 601846, 602216, 602477
HNGJE16	661976	4547	3 - 212	14299		H0341: 1 and S0052: 1.	
HNGJE33	795219	4548	134 - 286	14300		S0052: 1 and S0428: 1.	
HNGJE40	960003	4549	74 - 304	14301	Asn-1 to Gly-7, Pro-21 to Leu-26.	H0265: 1 and S0052: 1.	
HNGJE56	669732	4550	222 - 374	14302		S0052: 2	
HNGJF26	666504	4551	2 - 241	14303	Leu-38 to Ala-43.	S0052: 2	
HNGJF65	698487	4552	401 - 589	14304		S0052: 2, H0306: 1 and L0790: 1.	
HNGJF73	683440	4553	217 - 408	14305		S0052: 2	
HNGJF79	775221	4554	1 - 156	14306		H0271: 1 and S0052: 1.	
HNGJG15	660308	4555	121 - 354	14307	Pro-44 to Leu-55, Arg-60 to Ser-66, Arg-69 to Trp-78.	S0052: 2	
HNGJG37	708703	4556	6 - 146	14308	Ser-1 to His-6.	S0052: 2	
HNGJG72	970797	4557	53 - 163	14309	Thr-16 to Tyr-24, Glu-29 to Gln-34.	S0052: 1 and H0445: 1.	
HNGJG89	778294	4558	85 - 252	14310		S0052: 2	
HNGJH09	415566	4559	39 - 179	14311		S0052: 1 and S0216: 1.	
	860378	9587	118 - 315	19339	Glu-52 to Lys-57.		
HNGJH11	860350	4560	1 - 222	14312	Gly-1 to Val-13, Ser-34 to Leu-39.	S0052: 3	
HNGJH35	952237	4561	3 - 167	14313	Ser-14 to Glu-20.	S0052: 1 and S0428: 1.	
HNGJH50	666843	4562	134 - 307	14314		S0052: 3	
HNGJH96	953648	4563	1 - 177	14315		S0052: 2	
HNGJI29	690667	4564	197 - 385	14316	Trp-1 to Asn-9.	S0052: 2	
HNGJI35	707328	4565	2 - 223	14317	Glu-16 to Arg-29, Ser-41 to Gly-48.	S0052: 4	
HNGJI42	465160	4566	158 - 418	14318		S0052: 2	
HNGJI54	465159	4567	1 - 381	14319	Glu-43 to Ala-49,	S0052: 3	

HNGJI71	760393	4568	48 - 308	14320	Cys-57 to Ser-62, Arg-79 to Thr-86.	S0052: 2
HNGJI77	772215	4569	94 - 357	14321	Pro-25 to Arg-32, Arg-38 to Gly-49.	S0052: 2
HNGJI83	781213	4570	221 - 376	14322	Ala-12 to Asn-17, Thr-23 to Gln-33.	S0052: 3
HNGJI22	597096	4571	1 - 285	14323	Arg-7 to Pro-21, Pro-40 to Gln-47.	S0052: 1, S0428: 1 and L0599: 1.
HNGJI51	725702	4572	124 - 53	14324	Thr-2 to Cys-13, Asp-24 to Gln-32.	S0052: 2
HNGJK04	615288	4573	76 - 222	14325	Ala-2 to Thr-18, Arg-23 to Gln-29.	S0052: 2
HNGJK06	935548	4574	2 - 163	14326		S0052: 2
HNGJK12	970686	4575	132 - 227	14327	Glu-1 to Ser-9.	S0002: 1 and S0052: 1.
HNGJK23	707327	4576	3 - 83	14328		S0052: 2
HNGJK29	663954	4577	1 - 174	14329	Cys-36 to Ser-41, Thr-48 to Arg-58.	S0052: 2
HNGJK42	713810	4578	14 - 223	14330	Lys-3 to Val-9, Cys-24 to Phe-30, Pro-46 to Gln-57.	S0052: 2
HNGJK50	860196	4579	69 - 398	14331	His-21 to Arg-26, Met-38 to Ala-47.	S0052: 1 and S0428: 1.
HNGJK54	730713	4580	238 - 101	14332	Gln-1 to Ile-9.	S0052: 3
HNGJK58	736080	4581	122 - 355	14333	His-16 to Lys-48.	S0052: 2
HNGJK71	739323	4582	87 - 290	14334		S0052: 2
HNGJK77	732737	4583	191 - 319	14335	His-1 to Trp-12, Ser-29 to Ile-34.	S0052: 3 and H0444: 1.
HNGJK89	772218	4584	2 - 265	14336	Arg-2 to Gly-12.	S0052: 3
HNGJL16	661977	4585	177 - 359	14337	Ser-1 to Ser-8, Asn-44 to Ala-54.	S0052: 2
HNGJL26	681819	4586	1 - 369	14338	Gly-1 to Ser-7, Pro-12 to Glu-20.	S0052: 2
HNGJL27	725295	4587	1 - 264	14339		L0639: 1, L0659: 1, L0517: 1, S0052: 1 and S0216: 1.
HNGJL60	462981	4588	164 - 439	14340	Ser-47 to Asp-52.	S0052: 2

HNGIL73	783518	4589	69 - 311	Asn-1 to Leu-8.	S0052: 2		
HNGIL76	793537	4590	69 - 608	Asp-36 to Arg-44.	S0052: 1, S0053: 1 and L0361: 1.	19q13.3-q13.4	113900, 126340, 126391, 130410, 134790, 138570, 160900, 173850, 191044, 258501, 600040, 600138, 602225, 602225
HNGJM20	964800	4591	2 - 157		S0052: 2		
HNGJM35	707324	4592	3 - 116	Arg-18 to Leu-25.	S0052: 2 and L0361: 1.		
HNGJM82	967328	4593	432 - 19		S0134: 1, L0769: 1, L0794: 1, S0052: 1, S0428: 1, L0753: 1, L0592: 1 and L0599: 1.		
HNGJO10	964678	4594	140 - 301	Gly-1 to Glu-6.	S0052: 2		
HNGJO35	707329	4595	2 - 403	Arg-39 to Gly-49, Pro-51 to Thr-56.	S0052: 2		
HNGJO45	717069	4596	322 - 408		S0052: 1 and S0053: 1.		
HNGJO73	668997	4597	208 - 360	Ser-28 to Ser-33, Gly-39 to Thr-46.	H0318: 1 and S0052: 1.		
HNGJP03	860363	4598	95 - 376	Cys-13 to Arg-22, Pro-29 to Lys-41.	S0052: 2		
HNGJP10	964668	4599	72 - 392	Gly-12 to Lys-22, Asn-29 to Ser-34.	S0052: 1 and S0428: 1.		
HNGJP80	766278	4600	118 - 429	Pro-10 to Gln-15.	H0305: 1, S0052: 1 and S0428: 1.		
HNGJQ14	881542	4601	2 - 370		S0052: 1 and S0053: 1.		
HNGJQ23	789764	4602	192 - 314	Gly-12 to Pro-18.	S0052: 1 and S0216: 1.		
HNGJQ25	924652	4603	3 - 170		S0052: 2		
HNGJQ35	707326	4604	146 - 388		S0052: 2		
HNGJR01	916555	4605	203 - 373		H0090: 1 and S0052: 1.		
HNGJS24	677235	4606	178 - 333		S0052: 2		
HNGJS45	720746	4607	63 - 1		S0052: 2		
HNGJS53	728258	4608	256 - 444		S0052: 2		
HNGJS64	746606	4609	16 - 357	Ser-2 to Arg-8, Gly-14 to Trp-24, Thr-28 to Gln-33,	S0052: 2		

HNGJS91	920755	4610	3 - 221	14362	Gly-40 to Phe-58, Gly-80 to Arg-94.	S0052: 2	
HNGJT36	888329	4611	122 - 352	14363	His-1 to Asp-6, Ile-67 to Trp-72.	S0052: 2	
HNGJT72	775502	4612	1 - 288	14364	Asn-5 to Ser-12.	S0052: 1 and S0428: 1.	
HNGJT93	792338	4613	158 - 343	14365	Thr-28 to Leu-33, Trp-61 to Pro-67.	S0052: 2	
HNGJT95	953418	4614	120 - 254	14366	Thr-8 to Asp-15.	S0052: 2	
HNGJU36	708122	4615	651 - 457	14367		S0052: 3 and H0521: 1.	
HNGJU50	724416	4616	272 - 412	14368		S0052: 2	
HNGJU51	725703	4617	2 - 109	14369		S0052: 2	
HNGJU78	860347	4618	166 - 375	14370	Glu-21 to Asn-27.	S0052: 2	
HNGJV04	615283	4619	18 - 224	14371	Gln-28 to Gly-42.	S0052: 2	
HNGJV10	964672	4620	205 - 378	14372	Ser-5 to Val-10, Ala-27 to Gly-33.	S0052: 2	
HNGJV91	790213	4621	144 - 1	14373		S0052: 1 and S0216: 1.	
HNGKA62	876593	4622	97 - 345	14374	Arg-1 to Ser-6.	H0556: 1, S0428: 1, L0589: 1 and H0423: 1.	
HNGKB11	966119	4623	3 - 311	14375	Gly-2 to Pro-17, Pro-31 to Gly-48.	S0428: 2	
HNGKB25	944424	4624	89 - 445	14376	Trp-1 to Gln-8, Thr-16 to Trp-22, Ser-67 to Ser-75.	AR061: 4, AR089: 4 S0114: 1, H0376: 1, S0428: 1 and L0748: 1.	
HNGKB78	971110	4625	98 - 322	14377	Lys-13 to Thr-18, Ser-24 to Ser-29.	S0428: 1, S0053: 1 and S0216: 1.	
HNGKB93	791760	4626	63 - 305	14378	Arg-6 to Gly-21, Thr-34 to Pro-39, Pro-43 to Pro-50.	H0087: 1 and S0428: 1.	
HNGKD55	860343	4627	359 - 547	14379	Met-40 to Ser-45.	S0428: 2	
HNGKD94	793414	4628	164 - 364	14380		H0271: 1, S0052: 1 and S0428: 1.	
HNGKE05	860320	4629	297 - 497	14381	Arg-6 to Gly-12, Arg-36 to Arg-47.	S0428: 2	
HNGKE07	952221	4630	2 - 361	14382	Lys-56 to Ser-62.	S0428: 2, S0053: 1 and S0216: 1.	19q13.3-q13.4	113900, 126340, 126391, 130410,

Clone		SEQ ID	Range	SEQ ID	Region	Cassette	Chromosome	Associations
HNGKE52	812714	4631	304 - 579	14383	Pro-32 to Gln-38, Pro-56 to Leu-66.	S0428: 2		134790, 138570, 160900, 173850, 191044, 258501, 600040, 600138, 602225, 602225
HNGKE73	860312	4632	251 - 631	14384		S0428: 2 and S0052: 1.		
HNGKE89	786257	4633	268 - 420	14385		S0428: 2		
HNGKE91	789685	4634	137 - 274	14386	Glu-29 to Phe-35.	S0428: 2 and S0052: 1.		
HNGKE93	791623	4635	3 - 311	14387	Gly-1 to Pro-7.	H0255: 1 and S0428: 1.		
HNGKF01	915247	4636	59 - 352	14388	Pro-33 to Pro-49, Pro-56 to Pro-63.	S0428: 2		
HNGKF11	965047	4637	6 - 185	14389		S0428: 2 and S0052: 1.		
HNGKF83	780453	4638	1 - 243	14390	His-5 to Gly-15, Phe-22 to Arg-28, Ser-45 to Gly-54, Ser-64 to Lys-71.	S0428: 2		
HNGKG43	958487	4639	287 - 640	14391	Lys-41 to Asn-46, Lys-55 to Thr-61, Ser-77 to Thr-84.	S0428: 1 and S0216: 1.		
HNGKG61	860317	4640	57 - 233	14392	Thr-6 to Gly-17.	S0428: 2 and S0052: 1.		
HNGKH04	926987	4641	318 - 1	14393		S0052: 1 and S0428: 1.		
HNGKI30	860205	4642	20 - 328	14394	Phe-33 to Gly-41, Glu-58 to Lys-63, Arg-78 to Ser-83, Pro-92 to Leu-101.	S0428: 2	5q32-q33	109690, 109690, 131400, 138491, 138491, 138491, 154500, 180071, 181460, 222600, 222600, 222600, 234000, 272750, 600807, 601411, 601596, 602089
HNGKI36	784854	4643	3 - 206	14395	Ala-24 to Ser-30, Gln-61 to Gln-68.	S0428: 2		
HNGKI90	787378	4644	2 - 169	14396		S0428: 2		
HNGKI93	791671	4645	42 - 515	14397	Leu-26 to Arg-32.	H0255: 1 and S0428: 1.		

HNGKJ01	915231	4646	55 - 444	14398	Ile-1 to Thr-26, Arg-36 to Ala-42, Glu-61 to Lys-66, Arg-76 to Arg-81, Val-104 to Ile-117, Gln-119 to Gly-127.	S0428: 1 and S0053: 1.
HNGKJ38	806053	4647	57 - 356	14399	Glu-24 to Pro-31.	S0428: 2, H0264: 1, S0052: 1 and S0053: 1.
	974222	9588	426 - 184	19340	Ser-26 to His-31, Ala-65 to Glu-71.	
HNGKJ51	883072	4648	1 - 315	14400	Asp-1 to Arg-7.	S0428: 2
HNGKK35	806051	4649	49 - 285	14401	Pro-72 to Arg-79.	S0428: 2
HNGKO11	966093	4650	123 - 1	14402		S0428: 2
HNGKP29	860305	4651	3 - 203	14403	Gln-5 to Pro-10.	S0052: 1 and S0428: 1.
HNGKS06	974356	4652	148 - 372	14404		H0069: 1 and S0428: 1.
HNGKT08	958311	4653	175 - 369	14405		S0052: 1 and S0428: 1.
HNGKT69	860302	4654	159 - 374	14406		S0052: 1 and S0428: 1.
HNGKU04	926948	4655	149 - 289	14407	Gln-1 to Lys-13.	S0052: 1 and S0428: 1.
HNGKV01	915218	4656	65 - 280	14408	Phe-14 to Gln-22, Gly-37 to Cys-43, Met-47 to Lys-53, Glu-56 to Ser-62.	S0052: 1 and S0428: 1.
HNGLA54	860206	4657	1 - 153	14409	Pro-23 to Cys-34.	S0428: 2
HNGLC01	915288	4658	346 - 579	14410		S0052: 1 and S0428: 1.
HNGLC46	775300	4659	63 - 257	14411	Pro-2 to Gly-20.	S0052: 1 and S0428: 1.
HNGLD34	830026	4660	97 - 210	14412	Pro-14 to Gly-23.	S0428: 2 and L0750: 1.
HNGLE25	860260	4661	2 - 313	14413	Thr-1 to Trp-6, Pro-80 to Ser-88.	S0428: 2
HNGLE52	835972	4662	181 - 396	14414		S0052: 1 and S0428: 1.
HNGLE74	860263	4663	163 - 468	14415	Pro-1 to Asn-6.	S0052: 1 and S0428: 1.
HNGLF03	922969	4664	320 - 472	14416	Glu-1 to Ser-13, Glu-24 to Gly-30.	H0271: 1, S0052: 1 and S0428: 1.
HNGLF08	958312	4665	199 - 465	14417	Ser-11 to Trp-21, Arg-74 to Glu-80.	S0428: 2, S0052: 1 and L0731: 1.
HNGLG06	839088	4666	234 - 689	14418	Asp-73 to Gly-79, Val-107 to Ile-114,	AR061: 7, AR089: 2 H0318: 1, S0144: 1 and

HNGLH72	785570	4667	280 - 453	14419	Met-120 to Tyr-126.	S0428: 1.
HNGLH82	954140	4668	105 - 404	14420	Ser-9 to Ser-25.	S0052: 1 and S0428: 1.
HNGLJ04	954943	4669	332 - 496	14421		S0052: 3 and S0428: 1.
HNGLJ20	806045	4670	78 - 323	14422		S0052: 1 and S0428: 1.
HNGLK13	785685	4671	23 - 238	14423		S0428: 2
HNGLK65	795280	4672	301 - 522	14424		S0052: 1 and S0428: 1.
HNGLK90	795225	4673	234 - 491	14425	Tyr-1 to Cys-9.	S0428: 2
HNGLL03	923028	4674	220 - 420	14426		S0428: 2
HNGLL11	966105	4675	35 - 190	14427		S0052: 1 and S0428: 1.
HNGLL24	859922	4676	330 - 584	14428	Lys-1 to Gly-10, Met-12 to Gln-18, Arg-48 to Pro-61.	S0428: 1 and S0216: 1.
HNGLL31	789193	4677	139 - 288	14429	Glu-29 to Trp-34.	H0179: 1 and S0428: 1.
HNGLL41	845274	4678	734 - 288	14430	Gly-1 to Gly-8.	AR051: 29, AR050: 25, AR054: 17 S0428: 2
	873128	9589	157 - 456	19341	Pro-21 to Tyr-32.	S0052: 1 and S0428: 1.
HNGLL67	860253	4679	46 - 336	14431		S0052: 1 and S0428: 1.
HNGLL91	789743	4680	140 - 421	14432	Ser-12 to Glu-25.	S0428: 3
HNGLM06	919222	4681	36 - 122	14433	Asp-1 to Tyr-8.	S0428: 2
HNGLO10	963504	4682	13 - 285	14434		S0052: 1 and S0428: 1.
HNGLO70	779223	4683	49 - 213	14435	Gly-19 to Leu-30.	S0428: 2
HNGLO80	775504	4684	505 - 741	14436	Arg-6 to Ile-11.	S0052: 1 and S0428: 1.
HNGLO86	780484	4685	138 - 527	14437	Met-11 to Arg-16.	S0428: 2 and L0748: 1.
HNGLO92	924891	4686	73 - 666	14438	Ser-2 to Trp-8, Arg-15 to Ser-25, Pro-41 to Glu-46, Gln-51 to Asn-57, Gly-106 to Ala-113, Pro-124 to Pro-134.	S0052: 1 and S0428: 1.
HNGLR39	835586	4687	434 - 679	14439	Phe-38 to Glu-48.	S0428: 3
HNGLR91	789707	4688	3 - 347	14440	Thr-29 to Ser-41, Lys-54 to Cys-67.	S0052: 1 and S0428: 1.
HNGLS86	784860	4689	259 - 405	14441		S0052: 1 and S0428: 1.

HNGLT67	958777	4690	14442	377 - 547		H0589: 1 and S0428: 1.
HNGLX63	934371	4691	14443	3 - 203		S0428: 2
HNGMA01	915306	4692	14444	251 - 424	Pro-31 to Gly-36, Lys-43 to Lys-49.	S0428: 2
HNGMA49	860244	4693	14445	336 - 94		S0428: 2 and S0052: 1.
HNGMB26	860166	4694	14446	33 - 317	Pro-24 to Gln-29.	S0428: 2
HNGMB33	773752	4695	14447	263 - 541	Ala-5 to Arg-13, Arg-31 to Gly-48, Gly-52 to Thr-58.	S0052: 1 and S0428: 1.
HNGMC51	860243	4696	14448	11 - 454	Asn-1 to Tyr-6.	H0402: 1, S0428: 1 and L0439: 1.
HNGMD03	923041	4697	14449	121 - 372		S0428: 2
HNGMD04	927026	4698	14450	36 - 338	Pro-41 to Leu-47, Thr-50 to Ala-59.	S0428: 2
HNGME93	793483	4699	14451	16 - 252	Ala-12 to Gln-17, Pro-59 to Arg-67.	S0428: 2
HNGMF04	860242	4700	14452	353 - 592	Gln-26 to Lys-36.	S0052: 1 and S0428: 1.
HNGMF11	966114	4701	14453	1 - 159		S0428: 2
HNGMF46	795236	4702	14454	226 - 2		S0428: 2 and H0023: 1.
HNGMF79	772974	4703	14455	66 - 287	Lys-4 to Gly-21, Glu-57 to Thr-62.	S0428: 2
HNGMF94	966091	4704	14456	147 - 389	Pro-34 to Asp-46, Arg-52 to Lys-57.	S0428: 2
HNGMG06	934318	4705	14457	111 - 254		S0428: 2
HNGMG08	958361	4706	14458	18 - 218		S0428: 2
HNGMH80	775503	4707	14459	335 - 487	Pro-31 to Leu-45.	S0114: 1 and S0428: 1.
HNGMH93	791725	4708	14460	232 - 429	Arg-1 to Met-6, Phe-35 to Leu-40, Pro-55 to Arg-66.	S0052: 1 and S0428: 1.
HNGMJ04	923011	4709	14461	284 - 156		S0428: 2
HNGMJ89	786340	4710	14462	107 - 463	Ala-63 to Trp-69.	AR089: 15, AR061: 7 S0428: 2
HNGML07	952224	4711	14463	214 - 453	Ala-1 to Glu-19, Gln-25 to Trp-36, Met-53 to Gly-66.	S0428: 2
HNGML53	860240	4712	14464	86 - 433	Ser-35 to Pro-41.	S0428: 2

HNGMM51	860201	4713	121 - 501	14465	Arg-8 to Ser-13, Ala-31 to Cys-37, Thr-76 to Glu-83, Leu-93 to Arg-99.	S0428: 2
HNGMM54	933358	4714	2 - 220	14466	Gly-11 to Asp-33.	H0250: 2 and S0428: 1.
HNGMM87	806036	4715	138 - 437	14467	Asn-10 to Arg-22, Asn-91 to Ser-96.	H0271: 1 and S0428: 1.
HNGMV73	806000	4716	250 - 519	14468	Glu-1 to Leu-11.	S0428: 2
HNGMW52	860231	4717	176 - 595	14469	Thr-1 to Ser-7.	S0428: 2
HNGMW92	790852	4718	226 - 618	14470	Asn-8 to Arg-17, Asn-35 to Tyr-40.	S0052: 1 and S0428: 1.
HNGMX80	786255	4719	2 - 268	14471	Lys-13 to Trp-23, Arg-36 to Lys-41.	S0428: 2, H0610: 1, H0271: 1 and S0052: 1.
HNGMX87	835612	4720	3 - 380	14472	Pro-31 to Asp-58, Ser-77 to Gln-87, Pro-89 to Leu-95.	S0428: 2
HNGMX91	789680	4721	79 - 309	14473	Ser-1 to Leu-6.	S0052: 1 and S0428: 1.
HNGNA23	779201	4722	1 - 135	14474	Glu-1 to Ser-20.	S0428: 2
HNGNB01	915258	4723	9 - 83	14475	Phe-1 to Thr-10.	S0428: 2
HNGNE65	963425	4724	136 - 561	14476	Val-1 to Gly-6.	S0428: 2
HNGNF40	861967	4725	1 - 237	14477		H0300: 2 and S0428: 1.
HNGNG37	847818	4726	333 - 506	14478	Leu-49 to Arg-54.	S0428: 2, L0517: 1 and S0052: 1.
HNGNH03	922831	4727	117 - 389	14479	Asn-1 to Pro-21, Ser-33 to Trp-42, Thr-52 to Lys-57, Pro-69 to Trp-89.	H0556: 1 and S0428: 1.
HNGNI04	926985	4728	214 - 492	14480	Ser-27 to Gln-38.	S0428: 2
HNGNI52	781913	4729	146 - 313	14481	Ala-1 to Gly-6, Thr-12 to Thr-19.	S0052: 1, S0428: 1 and S0053: 1.
HNGNI75	860168	4730	35 - 319	14482	Arg-45 to Glu-50, Thr-62 to Asn-72.	S0428: 2
HNGNI94	893899	4731	2 - 370	14483	Pro-9 to Ser-14, Ser-46 to Ala-53, Ala-69 to Ala-86, Arg-96 to Pro-108.	S0052: 2 and S0428: 1.

HNGNM24	841902	4732	67 - 243	Glu-37 to Arg-42.	H0057: 1 and S0428: 1.
HNGNO03	860155	4733	269 - 475	Ala-39 to Arg-46.	S0428: 2
HNGNR04	926870	4734	229 - 387		S0052: 1 and S0428: 1.
HNGNS10	963470	4735	575 - 733		S0428: 2
HNGNS58	788971	4736	40 - 210		S0052: 1 and S0428: 1.
HNGNS90	787388	4737	283 - 465		S0052: 1 and S0428: 1.
HNGNV80	908167	4738	39 - 389	Pro-40 to Arg-54, Pro-57 to Gly-72, Glu-74 to Ala-81, Pro-89 to His-96, Leu-99 to Glu-104.	S0428: 2
HNGNW04	860199	4739	116 - 253	Arg-22 to Glu-36.	H0486: 1 and S0428: 1.
HNGNW85	783747	4740	3 - 248		H0402: 1 and S0428: 1.
HNGNX37	806018	4741	321 - 539		S0428: 2
HNGNX65	806042	4742	140 - 346	Glu-48 to Cys-54.	S0428: 2
HNGNZ01	860158	4743	261 - 398		S0428: 2 and S0052: 1.
HNGNZ38	790926	4744	110 - 280		S0216: 2 and S0428: 1.
HNGNZ91	839887	4745	88 - 399		S0428: 3 and L0377: 1.
HNGOA11	966082	4746	12 - 224	Leu-39 to Gly-44.	S0052: 1 and S0428: 1.
HNGOA82	779154	4747	285 - 449		S0052: 1 and S0428: 1.
HNGOB95	791700	4748	1 - 144	Glu-18 to Glu-25, Ser-36 to Val-42.	S0428: 2
HNGOD68	790805	4749	43 - 282	Asp-73 to Phe-80.	S0428: 2
HNGOE64	860143	4750	192 - 563		S0428: 3
HNGOF50	796548	4751	140 - 367	Ser-10 to Leu-19.	S0428: 1 and S0053: 1.
HNGOF84	782188	4752	1 - 333	Gly-1 to Gly-9, Thr-57 to Thr-71, Thr-77 to Ser-82.	S0428: 1 and S0216: 1.
HNGOF85	783717	4753	417 - 725		H0402: 1, S0428: 1 and S0053: 1.
HNGOG49	971178	4754	1 - 255		S0052: 1 and S0428: 1.
HNGOH42	958943	4755	337 - 519	Pro-7 to Arg-12.	H0580: 1 and S0428: 1.
HNGOI86	806013	4756	456 - 193	Lys-43 to Thr-58, Asp-77 to Arg-88.	S0428: 2
HNGOJ13	921433	4757	85 - 339	His-5 to Asn-16,	S0052: 1 and S0428: 1.

					Tyr-61 to Gly-71.	
HNGOJ64	860193	4758	2 - 304	14510		S0428: 2
HNGOK59	789689	4759	108 - 242	14511	Ser-14 to Arg-25.	S0428: 2
HNGOK86	784813	4760	203 - 442	14512	Pro-22 to Gln-28.	S0116: 1 and S0428: 1.
HNGOL14	860185	4761	3 - 143	14513		S0052: 1 and S0428: 1.
HNGOO22	953888	4762	3 - 155	14514		S0052: 1 and S0428: 1.
HNGOP04	926972	4763	230 - 406	14515		S0428: 2
HNGOP10	963483	4764	289 - 438	14516	Phe-4 to Thr-10, Pro-23 to Ser-30.	L0521: 2, H0305: 1, S0002: 1, S0428: 1, L0758: 1 and L0759: 1.
HNGOS22	860176	4765	69 - 314	14517	Pro-8 to Ser-28.	S0134: 1 and S0428: 1.
HNGOV03	922963	4766	53 - 286	14518	Phe-33 to Leu-39.	S0428: 2
HNGOV65	921416	4767	2 - 187	14519		S0052: 2 and S0428: 1.
HNGOW13	926929	4768	2 - 310	14520	Gln-11 to His-23, Glu-25 to Gly-41.	S0428: 2
HNGOY01	915210	4769	162 - 359	14521	Thr-19 to Cys-27, Val-33 to Gly-39.	S0428: 2
HNGOY10	915012	4770	3 - 386	14522	Ser-23 to Ala-30, Ala-44 to Ala-54.	H0457: 1 and S0428: 1.
HNGOZ17	880777	4771	118 - 246	14523		S0052: 1 and S0428: 1.
HNGPH12	969683	4772	174 - 353	14524		S0428: 2 and S0053: 1.
HNGPI08	947384	4773	461 - 655	14525	Glu-17 to Gly-23.	S0428: 2 and L0766: 1.
HNGPJ23	855983	4774	250 - 507	14526	Pro-1 to Leu-7, Lys-14 to Trp-22, Leu-24 to Gly-30, Ser-47 to Gly-53, Gln-71 to Leu-86.	H0444: 2 and S0428: 1.
HNGPJ51	805997	4775	136 - 288	14527		S0428: 2
HNGPL91	959740	4776	177 - 350	14528	Ala-9 to Trp-16.	S0052: 1 and S0428: 1.
HNGPN01	913782	4777	105 - 413	14529	Ser-17 to Ser-25.	S0428: 2
HNGPN46	954997	4778	331 - 588	14530	Lys-1 to Asp-7.	S0428: 2
HNGPP61	860145	4779	119 - 475	14531		S0428: 2
HNGPR03	949269	4780	3 - 140	14532	Gln-39 to Cys-45.	S0428: 2
HNGPS10	963469	4781	3 - 239	14533		S0428: 1 and S0216: 1.
HNHAB29	860141	4782	2 - 145	14534	Arg-16 to Gly-23.	S0053: 2

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HNHAB93	527921	3 - 149	14535	Gly-1 to Gly-9, Glu-24 to Gly-35.	S0053: 2
HNHAF77	527971	7 - 135	14536		S0053: 2
HNHAG50	527815	22 - 180	14537	Gly-10 to Trp-22, Pro-25 to Cys-32, Asp-35 to Ser-43.	S0053: 2
HNHAG51	725898	10 - 174	14538		S0053: 2
HNHAG64	527809	76 - 231	14539		S0053: 2
HNHAH38	860118	140 - 388	14540	Tyr-34 to Thr-39.	S0053: 2
HNHAH84	527806	89 - 235	14541	Lys-1 to Trp-10.	S0053: 2
HNHAI11	967668	81 - 377	14542	Gln-37 to Asn-42, Arg-47 to Lys-67.	L0766: 2, S0053: 2 and L0758: 1.
HNHAI15	860128	2 - 58	14543		S0053: 2
HNHAI68	527572	85 - 165	14544		S0053: 2
HNHAJ59	703576	274 - 417	14545		S0053: 1 and S0216: 1.
HNHAK83	574391	25 - 219	14546		S0053: 2
HNHAP79	574384	2 - 139	14547		S0053: 2
HNHAW75	515480	240 - 1	14548	Lys-19 to Gln-25, Leu-68 to Gly-73.	S0053: 2
HNHBC30	693318	93 - 230	14549		S0053: 1 and H0423: 1.
HNHBE19	724404	56 - 190	14550		S0053: 2
HNHBH62	574387	1 - 240	14551	Ser-1 to Phe-10, Leu-14 to Ile-19, Ser-41 to Ser-47, Ala-61 to Gly-66.	S0053: 2
HNHBH72	577334	241 - 399	14552	Thr-19 to Ser-27.	S0053: 2
HNHBK22	574305	66 - 272	14553	Arg-1 to Arg-7, Ala-16 to Ser-24.	S0053: 2 and S0216: 1.
HNHBK59	959771	2 - 286	14554	Arg-2 to Gly-11.	S0053: 2
HNHBK80	721688	82 - 240	14555		S0053: 2
HNHBM63	574310	135 - 302	14556		H0271: 1 and S0053: 1.
HNHBM66	860119	24 - 374	14557	Thr-42 to His-47, Leu-55 to Trp-60, Thr-75 to His-83, Pro-85 to Glu-96.	S0053: 2

HNHBO20	793416	4806	460 - 666	14558	Tyr-8 to Ser-16.	S0052: 1, S0428: 1 and S0053: 1.
HNHBO71	868059	4807	2 - 151	14559		S0053: 2
HNHBO83	526746	4808	109 - 237	14560	Glu-22 to Val-33.	S0053: 2
HNHBQ53	574090	4809	14 - 175	14561		S0053: 2
HNHBS07	953850	4810	57 - 173	14562		S0053: 2
HNHBS23	574048	4811	92 - 328	14563	Thr-1 to Lys-6, Gly-44 to Gly-51.	S0053: 2
HNHBS38	925693	4812	493 - 963	14564	Val-23 to Asn-43, Ser-91 to Gln-107.	H0650: 1, S0428: 1 and S0053: 1.
HNHBU20	669866	4813	129 - 257	14565	Lys-21 to Phe-27.	S0053: 2
HNHBU21	574030	4814	138 - 332	14566	Thr-14 to Met-26.	S0053: 3
	723352	9590	246 - 401	19342	Leu-12 to Ser-18.	S0053: 2
HNHBU37	574139	4815	3 - 338	14567	Thr-1 to Leu-8, Thr-50 to Lys-57.	S0053: 2
HNHBU79	597123	4816	268 - 89	14568		S0053: 2
HNHBU82	577193	4817	185 - 394	14569	Lys-8 to Arg-13, Ile-24 to Tyr-29, Arg-49 to Arg-60.	S0053: 2
HNHBU91	765815	4818	62 - 232	14570	Thr-1 to Leu-6.	S0053: 2
HNHBU92	753550	4819	12 - 254	14571	Glu-8 to Leu-16.	S0053: 3
HNHBU93	757745	4820	71 - 229	14572		S0053: 2
HNHBV55	574026	4821	85 - 219	14573	Leu-1 to Lys-8, Arg-19 to Cys-29.	S0053: 2
HNHBY06	936012	4822	28 - 210	14574		S0053: 1 and S0216: 1.
HNHBY45	774280	4823	213 - 389	14575		S0053: 1 and S0216: 1.
HNHBY60	964712	4824	2 - 187	14576	Pro-7 to Ala-12.	S0053: 3
HNHBY83	694401	4825	94 - 492	14577	His-21 to Asp-38, Glu-41 to Ile-53.	S0053: 2
HNHBZ03	924873	4826	152 - 349	14578		S0053: 2
HNHCC42	577343	4827	143 - 274	14579	Gly-15 to His-20.	S0053: 2
HNHCD63	574309	4828	102 - 359	14580		S0053: 2
HNHCE68	574028	4829	100 - 387	14581	Ser-4 to Gly-12.	S0053: 2
HNHCJ25	679154	4830	3 - 311	14582	Arg-1 to Asn-13, Pro-35 to Ala-41.	S0053: 2

HNHCJ35	860112	4831	3 - 182	14583		S0053: 2
HNHCJ39	574084	4832	1 - 129	14584	Lys-14 to Ala-19, Ser-27 to Ser-34.	S0053: 2 and L0789: 1.
HNHCJ68	753558	4833	65 - 250	14585	Lys-1 to Ala-11, Pro-19 to Lys-28, Ser-36 to Trp-41.	S0053: 2
HNHCJ71	760565	4834	79 - 198	14586	Ser-13 to Cys-23.	S0053: 1 and S0216: 1.
HNHCJ80	786033	4835	305 - 427	14587	Lys-12 to Arg-20.	S0053: 1 and H0436: 1.
HNHCL20	780527	4836	3 - 257	14588	Leu-52 to Ser-60, Gln-63 to Leu-68.	AR050: 182, AR054: 144, AR051: 129 H0060: 1, S0428: 1 and S0053: 1.
HNHCL38	574082	4837	1 - 225	14589	Gly-1 to Leu-11.	S0053: 2
HNHCL47	719476	4838	50 - 277	14590	Ala-1 to Glu-9, Ser-14 to Leu-19, Gly-25 to Leu-41.	S0053: 2
HNHCM80	573010	4839	9 - 293	14591		S0052: 1 and S0053: 1.
HNHCN70	577186	4840	62 - 193	14592		S0053: 2
HNHCO27	574337	4841	64 - 198	14593	Val-5 to Gln-14.	S0053: 2
HNHCO48	860641	4842	26 - 361	14594	Ser-11 to Ala-24, Glu-30 to Lys-37, Cys-45 to Gly-54, Thr-101 to Ser-112.	S0052: 2 and S0053: 1.
HNHCO64	574147	4843	61 - 246	14595		S0053: 2
HNHCP18	666844	4844	2 - 172	14596	Pro-1 to Lys-6.	S0053: 2
HNHCP22	934307	4845	284 - 586	14597	Phe-46 to Pro-54, Cys-69 to Glu-74.	S0428: 1 and S0053: 1.
HNHCP37	866950	4846	197 - 373	14598		S0114: 1 and S0053: 1.
HNHCP78	506696	4847	3 - 194	14599	Leu-3 to Arg-9.	S0053: 2
HNHCP88	574341	4848	1 - 240	14600		S0053: 2
HNHCQ70	757410	4849	3 - 263	14601		S0428: 1, S0053: 1, L0748: 1 and L0754: 1.
HNHCU18	574394	4850	32 - 130	14602	Met-34 to Gly-43, Val-56 to Arg-62, Glu-85 to Gly-90.	S0053: 2
HNHCU42	850918	4851	307 - 666	14603		H0457: 3, H0305: 1, H0589: 1 and S0053: 1.

HNHCU57	735005	4852	3 - 239	14604	Gln-58 to Gly-65.	S0053: 2
HNHCV72	766213	4853	221 - 343	14605		S0053: 1, S0216: 1 and L0439: 1.
HNHCZ07	953881	4854	18 - 176	14606	Ala-33 to Trp-39.	H0650: 1 and S0053: 1.
HNHCZ23	574325	4855	204 - 332	14607		S0053: 2
HNHDA07	855988	4856	149 - 394	14608	Ser-1 to Ala-10, Leu-12 to Met-19, Ser-37 to Ser-46, Cys-52 to Leu-58, Pro-74 to Tyr-80.	S0053: 1, S0216: 1 and H0444: 1.
HNHDA79	574350	4857	3 - 152	14609	Gln-15 to Gly-20.	S0053: 2
HNHDA88	574150	4858	1 - 90	14610		S0053: 2
HNHDB11	574323	4859	260 - 442	14611	Trp-7 to Gly-15, Thr-17 to Gln-31, Ser-40 to Ser-45.	S0053: 2
HNHDB23	676290	4860	76 - 303	14612		S0053: 2
HNHDB46	574329	4861	146 - 379	14613		S0053: 2
HNHDB93	800661	4862	1 - 72	14614		S0053: 1 and S0216: 1.
HNHDC26	574304	4863	145 - 300	14615		S0053: 2
HNHDC47	708705	4864	22 - 189	14616		S0053: 2
HNHDC83	577339	4865	192 - 434	14617	Ser-1 to Asn-13.	S0053: 2
HNHDC95	734794	4866	13 - 105	14618		S0053: 2
HNHDE38	709277	4867	132 - 260	14619	Ser-26 to Cys-31.	S0053: 1 and H0521: 1.
HNHDF31	968249	4868	8 - 130	14620	Leu-13 to Ser-20, Glu-28 to Ser-33.	S0053: 2
HNHDF48	574385	4869	61 - 174	14621		S0053: 2
HNHDH06	936046	4870	2 - 226	14622	Arg-18 to Arg-23.	S0053: 2
HNHDH60	860101	4871	49 - 210	14623		S0053: 2
HNHDL62	577701	4872	29 - 193	14624	Gly-48 to Arg-54.	S0053: 2
HNHDL90	789082	4873	116 - 397	14625	Arg-1 to Glu-6, Gln-25 to Gly-30, Pro-44 to Gly-56, Gly-60 to Trp-65.	S0053: 1 and S0216: 1.
HNHDL94	773592	4874	201 - 326	14626	Gly-7 to Tyr-13.	S0053: 2
HNHDM03	924713	4875	1 - 285	14627		S0053: 1 and S0216: 1.

HNHDM40	711352	4876	93 - 254	14628	His-27 to Lys-38.	S0053: 2
HNHDM50	724550	4877	33 - 281	14629	Cys-8 to Trp-19.	S0053: 2
HNHDM74	506621	4878	263 - 436	14630	Asn-29 to Ser-35.	S0053: 2
HNHDN27	573388	4879	2 - 187	14631		S0053: 2
HNHDN79	735007	4880	178 - 273	14632		S0052: 1 and S0053: 1.
HNHDP04	859988	4881	241 - 750	14633	Gly-17 to Gly-23.	S0053: 4
HNHDP29	746093	4882	172 - 354	14634		S0053: 1 and S0216: 1.
HNHDQ11	967334	4883	332 - 496	14635	Arg-8 to Gln-14, Lys-19 to Trp-38.	H0486: 1 and S0053: 1.
HNHDQ17	573328	4884	132 - 293	14636	Ile-1 to Val-10.	S0053: 3
HNHDQ35	707334	4885	1 - 126	14637	Lys-1 to Asn-16, Lys-18 to Cys-28.	H0264: 1 and S0053: 1.
HNHDQ39	704560	4886	2 - 151	14638	Gln-1 to Trp-9.	S0053: 2
HNHDQ56	577256	4887	322 - 507	14639	Leu-24 to Arg-29.	S0053: 3
HNHDQ65	573357	4888	148 - 258	14640		S0053: 2
HNHDQ71	496246	4889	143 - 400	14641		S0053: 2
HNHDQ93	923817	4890	37 - 231	14642		S0053: 1 and H0445: 1.
HNHDR10	968082	4891	1 - 189	14643	Asp-7 to Pro-14, Arg-19 to Met-27.	S0053: 2
HNHDR28	685580	4892	25 - 240	14644	Glu-16 to Arg-34.	S0053: 2
HNHDR71	575480	4893	51 - 230	14645	Arg-6 to Tyr-11, Asp-19 to Arg-26.	S0053: 2
HNHDS27	683585	4894	70 - 213	14646	Tyr-39 to Asn-48.	S0053: 3
HNHDS83	573347	4895	1 - 189	14647		S0053: 2
HNHDS88	573349	4896	184 - 348	14648		S0053: 2
HNHDT01	917004	4897	159 - 335	14649		H0271: 1 and S0053: 1.
HNHDT28	887158	4898	2 - 397	14650		AR054: 9, AR051: 4, AR050: 2 S0053: 4
HNHDT42	574455	4899	91 - 258	14651	Gln-1 to Phe-16.	S0052: 1 and S0053: 1.
HNHDT54	728871	4900	75 - 407	14652	Pro-64 to Trp-76.	H0580: 1 and S0053: 1.
HNHDU83	717796	4901	5 - 442	14653	Ser-1 to Asp-8, Pro-46 to Asp-51, Gly-84 to Pro-92.	S0053: 2
HNHDV50	506622	4902	3 - 209	14654	His-1 to Asn-7.	S0053: 2

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HNHDV84	750262	4903	3 - 242	14655	Ser-21 to Gln-35.	S0053: 2
HNHDW78	723189	4904	1 - 285	14656	Leu-13 to Trp-25.	S0053: 2, S0052: 1 and S0428: 1.
HNHDX80	779334	4905	98 - 298	14657	His-7 to Ser-12.	S0053: 1 and S0216: 1.
HNHDX84	615272	4906	3 - 119	14658	His-1 to Ser-6.	S0053: 2
HNHDY18	573329	4907	120 - 242	14659	Gly-11 to Met-16.	S0053: 2
HNHDY37	582473	4908	19 - 123	14660	Asn-1 to Leu-20.	H0305: 1, L0761: 1, L0791: 1 and S0053: 1.
HNHDY45	576776	4909	142 - 282	14661	Glu-1 to Gly-6, Val-40 to Phe-47.	S0052: 2 and S0053: 1.
HNHDY50	924211	4910	2 - 175	14662		S0053: 2
HNHDY54	945708	4911	1 - 546	14663	Ser-25 to Gly-33, Ser-43 to Trp-52.	AR061: 8, AR089: 2 S0053: 2
HNHDY83	795954	4912	1 - 255	14664	Gly-1 to Asn-6, Pro-19 to Leu-28.	S0053: 2
HNHDZ14	506738	4913	3 - 200	14665	His-1 to Pro-7, Ser-44 to Thr-50.	S0053: 2
HNHDZ26	419716	4914	96 - 431	14666	Trp-1 to His-6, Leu-25 to Trp-37.	S0053: 2 and L0774: 1.
HNHDZ69	573346	4915	72 - 182	14667	Leu-1 to Thr-14, Phe-30 to Phe-40.	S0053: 2
HNHEA06	835893	4916	110 - 331	14668		H0581: 1 and S0053: 1.
HNHEA21	574868	4917	1 - 243	14669		S0052: 1 and S0053: 1.
HNHEA40	573327	4918	3 - 179	14670		S0053: 2
HNHEA96	796491	4919	1 - 237	14671		S0053: 1 and S0216: 1.
HNHEB47	573339	4920	3 - 182	14672	Tyr-34 to Ser-40, Arg-46 to Arg-56.	S0053: 2
HNHEB88	412655	4921	51 - 140	14673		S0053: 2
HNHEC40	576507	4922	112 - 267	14674	Glu-24 to Gly-30, Ser-38 to Gly-47.	S0053: 2
HNHEC51	577306	4923	68 - 418	14675	Ala-3 to Ser-8, Pro-24 to Gly-35, Gly-51 to Thr-60.	S0053: 2 and H0271: 1.
HNHEC96	796463	4924	1 - 291	14676	Pro-7 to Met-12, Gln-22 to Ser-28.	S0053: 1 and S0216: 1.
HNHED02	920414	4925	188 - 340	14677	Cys-2 to Asn-8.	S0053: 2

HNHED51	682992	4926	339 - 686	14678	Thr-5 to Gly-13.	S0053: 1 and H0436: 1.
HNHED82	576541	4927	289 - 53	14679	Pro-17 to Leu-25, Gln-33 to Ser-41, Ala-62 to Ser-71, Ser-74 to Lys-79.	S0053: 2
HNHED83	576540	4928	124 - 330	14680	Pro-9 to His-15, Lys-27 to Lys-34, Lys-40 to Ile-55.	S0053: 2
HNHEE25	576512	4929	183 - 383	14681		S0053: 2
HNHEE30	576440	4930	267 - 410	14682	His-8 to Cys-40.	S0053: 2
HNHEE38	860073	4931	2 - 241	14683		S0053: 2
HNHEE40	576442	4932	289 - 426	14684	Asp-13 to Ala-19, Thr-40 to Gly-46.	S0053: 2
HNHEE49	576820	4933	74 - 313	14685		S0053: 2
HNHEF01	916792	4934	53 - 337	14686	Pro-1 to Pro-6, Gly-58 to Glu-63, Gln-68 to Lys-77.	S0053: 2
HNHEF73	576419	4935	3 - 206	14687	Lys-30 to Met-35.	S0053: 2
HNHEG28	586443	4936	28 - 336	14688	Thr-1 to Thr-11, Val-15 to Lys-26, Lys-80 to Gly-87.	AR050: 77, AR051: 70, AR054: 67 S0053: 2
HNHEG32	576426	4937	159 - 404	14689	Glu-1 to Leu-7, Ser-27 to Lys-32, Glu-36 to Glu-42, Ala-44 to Arg-53.	S0053: 2
HNHEG49	576415	4938	270 - 383	14690		S0053: 2
HNHEG68	861181	4939	192 - 299	14691		S0212: 1 and S0053: 1.
HNHEG91	506278	4940	158 - 289	14692	Ile-24 to Val-29.	S0053: 2
HNHEH04	582732	4941	64 - 171	14693	Glu-27 to Gly-36.	S0053: 2
HNHEH37	490514	4942	509 - 204	14694	Ile-29 to Ser-42, Glu-66 to Ala-92.	S0053: 2
	860064	9591	122 - 331	19343	Ala-12 to Cys-17, Glu-20 to Leu-30.	
HNHEH41	578589	4943	1 - 228	14695	Gln-1 to Arg-15.	H0073: 1 and S0053: 1.
HNHEH51	678114	4944	234 - 389	14696		S0053: 2
HNHEH52	860021	4945	67 - 372	14697	Thr-11 to Thr-18,	S0053: 2

HNHEH60	576517	4946	27 - 170	14698	Thr-31 to Glu-40.	S0053: 2
HNHEI06	923080	4947	220 - 375	14699	Arg-1 to Arg-6, His-24 to Glu-32.	S0053: 1 and S0216: 1.
HNHEI64	576549	4948	191 - 313	14700		S0053: 2
HNHEJ07	953586	4949	59 - 325	14701		S0053: 1, S0216: 1 and L0594: 1.
HNHEJ11	967265	4950	1 - 237	14702	Glu-1 to Asp-13.	S0053: 1 and S0216: 1.
HNHEJ23	576533	4951	19 - 288	14703	Tyr-1 to Phe-8, Gly-21 to His-34, Gly-42 to Gly-52, Gly-57 to Asn-64, Leu-81 to Pro-86.	S0053: 3
HNHEJ24	916556	4952	78 - 230	14704		S0053: 2
HNHEJ44	716723	4953	106 - 207	14705	Ser-1 to Cys-6.	S0053: 2
HNHEJ57	576535	4954	148 - 246	14706		S0053: 2
HNHEJ85	964882	4955	1 - 162	14707	Ala-24 to Glu-31, Asn-39 to Gly-46.	H0063: 1 and S0053: 1.
HNHEK01	916790	4956	223 - 465	14708	Cys-17 to Ser-25.	H0589: 1 and S0053: 1.
HNHEK63	576819	4957	1 - 465	14709	Gly-1 to Leu-6, Gly-40 to Arg-46, Cys-73 to Ser-80.	S0053: 2
HNHEK79	954548	4958	43 - 165	14710	Glu-4 to Thr-11, Ile-35 to Asn-46.	S0114: 1 and S0053: 1.
HNHEK83	576420	4959	3 - 212	14711	Lys-26 to Asn-34.	S0053: 2
HNHEL09	576418	4960	3 - 116	14712		S0053: 2
HNHEL37	713723	4961	345 - 223	14713		S0053: 1 and H0521: 1.
HNHEL42	859830	4962	209 - 412	14714		S0053: 1 and S0216: 1.
HNHEL44	576423	4963	3 - 212	14715		S0053: 2
HNHEL53	506281	4964	124 - 273	14716		S0053: 2
HNHEL82	576430	4965	246 - 386	14717		S0053: 2 and H0589: 1.
HNHEL94	786930	4966	1 - 249	14718	Lys-17 to Gln-22.	H0421: 2 and S0053: 1.
HNHEM04	950725	4967	2 - 154	14719		S0053: 2
HNHEM34	860047	4968	3 - 170	14720	Arg-38 to Lys-43.	S0428: 1 and S0053: 1.
HNHEM35	576424	4969	156 - 341	14721		S0053: 2

HNHEM83	825354	4970	30 - 425	14722		S0052: 2, S0216: 2 and S0053: 1.
HNHEM85	783480	4971	178 - 345	14723	Leu-2 to Ser-20, Lys-50 to Phe-56.	H0264: 1 and S0053: 1.
HNHEN02	920420	4972	210 - 311	14724		S0053: 2
HNHEN16	615402	4973	2 - 292	14725		S0053: 2
HNHEN56	733521	4974	182 - 346	14726		H0264: 1, S0053: 1 and L0600: 1.
HNHEN66	576544	4975	40 - 255	14727	Pro-25 to Pro-32.	S0053: 2
HNHEN76	576542	4976	1 - 237	14728	Ala-28 to Gln-44.	S0053: 2 and S0428: 1.
HNHEO29	576548	4977	120 - 440	14729	His-10 to Thr-16.	S0053: 2
HNHEO43	860046	4978	175 - 348	14730		H0556: 1 and S0053: 1.
HNHEO83	706683	4979	17 - 172	14731	His-15 to Gly-20, Ser-36 to Glu-47.	S0053: 2
HNHEO84	859992	4980	102 - 272	14732	Thr-3 to Lys-9, Cys-50 to Arg-56.	S0053: 2
HNHEP49	576453	4981	3 - 281	14733	Pro-1 to Cys-14, Glu-40 to Ser-48.	S0053: 2
HNHEQ07	953577	4982	141 - 314	14734	Thr-8 to Asp-19.	S0053: 2 and S0428: 1.
HNHEQ46	576437	4983	168 - 311	14735		S0053: 2
HNHEQ60	576455	4984	2 - 133	14736	Ala-1 to Arg-6.	S0053: 2
HNHEQ70	577188	4985	73 - 426	14737	Arg-1 to Cys-9, Leu-64 to Gly-75.	S0053: 2
HNHEQ92	576456	4986	56 - 226	14738	His-24 to Ile-29, Tyr-31 to Asn-41.	S0053: 2
HNHEQ94	577303	4987	121 - 249	14739	Glu-26 to Gln-37.	S0053: 2
HNHER06	918651	4988	1 - 285	14740	Gln-11 to His-19, Ala-25 to Glu-38.	S0053: 1 and S0216: 1.
HNHER21	496484	4989	92 - 529	14741	Pro-8 to Arg-13, Ser-33 to Val-38, Ile-50 to Ala-57.	S0053: 2
HNHES05	932092	4990	1 - 123	14742		S0053: 2
HNHES06	859833	4991	2 - 292	14743		S0053: 1 and S0216: 1.
HNHES07	953443	4992	55 - 183	14744	Asn-3 to Gln-9.	S0053: 2
HNHES11	967128	4993	92 - 268	14745	Glu-1 to Pro-12,	S0053: 2

HNHES23	675946	4994	258 - 46	14746	Pro-28 to Gly-37. Lys-53 to Asn-64.	L0766: 4, L0789: 1, S0052: 1 and S0053: 1.
HNHES35	576497	4995	80 - 325	14747	Pro-1 to Ala-7.	S0053: 2
HNHES56	881504	4996	91 - 393	14748	Ile-86 to Ser-93.	H0305: 1 and S0053: 1.
HNHES61	973297	4997	186 - 407	14749	Asp-14 to Gln-23, Arg-31 to Glu-38, Ile-42 to Gln-47.	S0053: 2
HNHES81	777979	4998	157 - 384	14750	Leu-15 to Gly-28, Val-44 to Cys-50.	S0053: 2
HNHET11	967127	4999	216 - 371	14751	Asp-14 to Phe-19, Glu-34 to Asn-43.	S0053: 2
HNHET17	576746	5000	110 - 322	14752	Gly-31 to Gly-37, Pro-39 to Ala-46, Cys-50 to Glu-60.	S0052: 1 and S0053: 1.
HNHET24	860006	5001	90 - 338	14753	Pro-49 to Asp-54, Ser-65 to Trp-73.	S0053: 2
HNHET25	953410	5002	63 - 362	14754	Ser-29 to Tyr-40, Ala-62 to Ala-85.	S0053: 2
HNHET57	577360	5003	240 - 458	14755		S0052: 1 and S0053: 1.
HNHEU50	724449	5004	78 - 254	14756	Arg-25 to Asn-36.	S0053: 2
HNHEU60	576387	5005	2 - 253	14757	Gln-19 to Gly-26.	S0053: 2
HNHEU71	574396	5006	111 - 290	14758		S0053: 2
HNHEV25	577111	5007	3 - 131	14759	Cys-26 to Gln-35.	S0053: 2
HNHEV44	716661	5008	3 - 206	14760		L0748: 2, H0402: 1, L0664: 1 and S0053: 1.
HNHEV46	577337	5009	3 - 182	14761	Glu-22 to Gly-31.	S0053: 2
HNHEV49	575777	5010	108 - 308	14762	Glu-30 to His-35.	S0053: 2
HNHEW03	924475	5011	116 - 298	14763	Asp-1 to Ser-16, Trp-43 to Ile-51.	S0052: 1, S0053: 1 and H0444: 1.
HNHEW14	658506	5012	31 - 336	14764	Gln-13 to Gly-26.	L0361: 2, S0428: 1 and S0053: 1.
HNHEW19	953446	5013	170 - 3	14765		S0053: 2
HNHEW21	670987	5014	69 - 197	14766		S0053: 3
HNHEW75	576361	5015	146 - 244	14767		S0053: 2

HNHEW76	770081	56 - 196	14768		S0053: 2
HNHEW95	953566	3 - 257	14769	His-1 to Arg-9, Arg-47 to Cys-62.	S0053: 2
HNHEX12	970764	168 - 374	14770		S0053: 2
HNHEX40	711225	289 - 426	14771	Cys-3 to Cys-12, Gly-16 to Glu-26, Leu-30 to Ile-36.	H0271: 1 and S0053: 1.
HNHEX54	575783	1 - 267	14772	Gly-1 to Gly-6, Ala-15 to Gly-20, Pro-31 to Arg-52, Leu-79 to Gly-88.	S0053: 2
HNHEX66	860036	101 - 424	14773		S0053: 4
HNHEX77	860037	205 - 432	14774	Pro-8 to Val-15, Pro-53 to Gln-58.	S0053: 3
HNHEY59	959668	3 - 191	14775	Thr-19 to Cys-32.	S0053: 2
HNHEY63	575741	263 - 397	14776		S0053: 2
HNHEY93	575745	1 - 99	14777		S0053: 2
HNHEZ07	953438	49 - 153	14778	Leu-24 to Cys-29.	H0318: 1 and S0053: 1.
HNHEZ18	575788	3 - 104	14779	Gln-3 to Lys-10, Asp-18 to Leu-24.	S0053: 2
HNHEZ19	887442	3 - 266	14780	Pro-16 to Gln-21.	AR054: 7, AR051: 1, AR050: 0 S0053: 2
HNHFA05	860033	1 - 267	14781	Ser-7 to Gly-22, Trp-41 to Thr-48, Pro-56 to Ser-65, Gln-73 to Leu-82.	S0053: 1 and S0216: 1.
HNHFA11	967126	179 - 361	14782		H0305: 1 and S0053: 1.
HNHFA35	577302	19 - 219	14783	Thr-1 to Ala-12.	S0053: 3
HNHFA59	576394	258 - 413	14784		S0053: 2
HNHFB09	575786	200 - 430	14785		S0053: 2
HNHFB19	668713	118 - 270	14786		S0053: 1 and H0444: 1.
HNHFB27	576865	86 - 427	14787	Leu-5 to Pro-11.	H0341: 1 and S0053: 1.
HNHFB32	836006	274 - 444	14788		S0053: 2
HNHFB39	575740	178 - 348	14789	Pro-3 to Cys-26.	S0053: 2
hmhfb53	728265	233 - 406	14790		S0053: 2

HNHFC34	860027	5039	3 - 182	14791	His-1 to Arg-10, Asn-20 to Trp-37, Arg-39 to Pro-47, Glu-53 to Asn-60.	S0053: 2
HNHFC43	583660	5040	277 - 104	14792	Ile-3 to Val-11, Pro-39 to Lys-45.	S0052: 1 and S0053: 1.
	590226	9592	349 - 215	19344		
	973274	9593	484 - 771	19345		
HNHFC60	576438	5041	95 - 343	14793		S0053: 2
HNHFC61	577185	5042	72 - 242	14794	Glu-10 to Val-32.	S0053: 2
HNHFC67	576385	5043	46 - 312	14795	Lys-3 to Pro-9.	S0053: 2
HNHFC78	576435	5044	97 - 303	14796	Ala-30 to Gly-43, Ser-53 to Ala-66.	S0053: 2
HNHFC92	577240	5045	33 - 236	14797		S0053: 2
HNHFD46	576796	5046	122 - 382	14798	Phe-4 to Gly-9, Thr-29 to Gln-52.	S0053: 2
HNHFD88	506354	5047	2 - 358	14799		S0052: 1 and S0053: 1.
HNHFE07	953585	5048	65 - 3	14800		S0053: 2
HNHFE40	576431	5049	148 - 336	14801		S0053: 2
HNHFE69	577244	5050	1 - 225	14802		S0053: 2
HNHFF08	860229	5051	434 - 607	14803	Lys-24 to Lys-31.	S0428: 4, S0116: 1, H0179: 1 and S0053: 1.
HNHFF21	625613	5052	239 - 340	14804		S0053: 2
HNHFF29	576412	5053	50 - 280	14805	Arg-11 to Gly-19.	S0053: 2
HNHFF56	576432	5054	157 - 390	14806	Pro-27 to Pro-32.	S0053: 2
HNHFG07	953569	5055	265 - 399	14807	Leu-1 to Tyr-11.	S0053: 2
HNHFG11	967255	5056	59 - 283	14808		S0053: 1 and H0444: 1.
HNHFG37	658459	5057	1 - 405	14809	Lys-22 to Gly-37, Thr-46 to Asp-51, Arg-72 to Asp-77.	S0053: 2
HNHFG94	720292	5058	129 - 341	14810	Gly-1 to Trp-10, Pro-13 to Pro-25.	S0053: 1 and H0521: 1.
HNHFH21	575785	5059	252 - 590	14811	Ala-26 to Phe-31, Ala-35 to Gly-42.	S0053: 2 and L0740: 1.
HNHFH56	575784	5060	1 - 177	14812		S0053: 2

HNHFH78	773610	5061	142 - 399	14813	Gly-8 to Trp-14.	S0053: 2
HNHFI69	575747	5062	3 - 89	14814	Lys-22 to Glu-29.	S0053: 2
HNHFI88	575751	5063	3 - 182	14815	Ala-40 to Ser-47.	S0053: 2
HNHFI95	577328	5064	260 - 406	14816		S0053: 2
HNHFJ45	720757	5065	172 - 435	14817	Glu-25 to Arg-31, Arg-35 to Gly-41, Asn-56 to Leu-61.	S0053: 2 and S0216: 1.
HNHFJ67	699523	5066	265 - 143	14818	Asn-1 to Arg-10, Asp-13 to Met-20.	S0053: 2, L0748: 1 and L0758: 1.
HNHFK37	576386	5067	34 - 336	14819	Asn-31 to Ser-37, Ser-78 to Gly-97.	S0053: 3
HNHFK77	970770	5068	43 - 453	14820	Glu-1 to Glu-9, Val-14 to Gly-19, Lys-25 to Thr-32.	S0053: 3
HNHFL48	664588	5069	3 - 122	14821	Val-6 to Ala-15.	S0053: 2
HNHFL82	576428	5070	45 - 398	14822	Leu-1 to Ser-9.	S0053: 2
HNHFM01	916787	5071	178 - 303	14823		S0053: 2
HNHFM32	577331	5072	14 - 358	14824		S0053: 2
HNHFN30	691083	5073	80 - 220	14825		S0053: 2
HNHFN52	727258	5074	1 - 165	14826	Gly-1 to Gln-12.	S0053: 2
HNHFN95	761672	5075	46 - 180	14827		S0053: 2
HNHFO45	576408	5076	180 - 338	14828	Val-1 to Gln-6.	S0053: 2
HNHFO48	707311	5077	17 - 292	14829	Gln-23 to His-32, Pro-48 to Leu-55.	H0416: 1, S0053: 1 and L0439: 1.
HNHFP09	860013	5078	85 - 279	14830		S0053: 1 and S0216: 1.
HNHFP10	964849	5079	284 - 430	14831	Leu-20 to Gly-27.	S0053: 2
HNHFQ01	916773	5080	2 - 301	14832	Ala-1 to Ala-6, Ala-29 to Leu-40, Ser-65 to Tyr-77.	H0179: 1 and S0053: 1.
HNHFQ19	418108	5081	1 - 162	14833	Trp-1 to Trp-6.	S0053: 2
HNHFQ30	692807	5082	1 - 285	14834	Thr-7 to Cys-13.	S0053: 2
HNHFQ75	766595	5083	27 - 356	14835		S0053: 2
HNHFQ88	576398	5084	1 - 204	14836	Thr-17 to Gly-25.	S0053: 2
HNHFQ92	576400	5085	111 - 1	14837		S0053: 2
HNHFR12	860003	5086	127 - 315	14838	Arg-1 to Gln-14,	S0053: 2

HNHFR22	964716	5087	19 - 444	14839	Gly-23 to Met-29.	S0052: 1 and S0053: 1.
HNHFR24	577330	5088	136 - 336	14840	Arg-92 to Gly-98.	S0053: 2
HNHFR67	751787	5089	1 - 228	14841	Lys-7 to Thr-13.	S0053: 2
HNHFS03	924610	5090	108 - 473	14842	Thr-1 to Lys-11.	H0271: 1 and S0053: 1.
HNHFS79	734798	5091	2 - 151	14843	Thr-1 to Asp-10, Arg-49 to Gln-55.	S0053: 2
HNHFU09	625726	5092	191 - 406	14844	Glu-4 to Glu-9, Glu-11 to Ser-19, Pro-24 to Cys-33.	S0053: 2
HNHFU35	707335	5093	184 - 312	14845		S0053: 2
HNHFU45	920844	5094	91 - 444	14846	Lys-9 to Gly-16.	H0073: 1 and S0053: 1.
HNHFU57	860002	5095	1 - 171	14847		S0053: 2
HNHFV16	952376	5096	77 - 373	14848	Leu-14 to Asn-29, Pro-45 to Arg-52, Ala-58 to Gly-65.	S0053: 1 and S0216: 1.
HNHFV52	576390	5097	34 - 399	14849		S0053: 2
HNHFV56	724417	5098	281 - 475	14850		S0052: 1 and S0053: 1.
HNHFV66	860000	5099	3 - 173	14851	Asn-1 to Glu-24.	S0053: 2
HNHFV68	925820	5100	86 - 346	14852		H0255: 2 and S0053: 1.
HNHFV70	757281	5101	150 - 329	14853		S0053: 1 and S0216: 1.
HNHFW08	959476	5102	1 - 297	14854	Glu-30 to Pro-50.	S0053: 2
HNHFW29	663912	5103	3 - 338	14855	Pro-11 to Ala-16, Ser-24 to Thr-34.	S0053: 2
HNHFX22	674638	5104	3 - 131	14856	Arg-17 to Val-26, Asn-28 to Gly-35, Arg-37 to Leu-42.	S0053: 2 and H0436: 2.
HNHFX35	668656	5105	3 - 356	14857	His-1 to Gly-9, Pro-23 to Gly-28, Gln-66 to His-75.	S0053: 2
HNHFX56	716628	5106	1 - 237	14858		S0053: 2
HNHFX68	753045	5107	109 - 38	14859		S0053: 2
HNHFX70	756459	5108	62 - 370	14860	Ser-53 to Asn-77.	S0052: 1 and S0053: 1.
HNHFX89	712347	5109	258 - 425	14861	Gln-8 to Ser-16.	S0053: 2
HNHFY21	670946	5110	2 - 169	14862	Lys-18 to Tyr-35.	S0053: 2

HNHFY95	734764	5111	24 - 164	14863	Pro-4 to Lys-19.	S0053: 2
HNHGA24	967093	5112	200 - 373	14864	Lys-1 to Ile-6.	S0053: 2 and H0271: 1.
HNHGA33	702461	5113	50 - 166	14865	Thr-45 to Lys-52.	S0053: 2
HNHGA46	719073	5114	1 - 156	14866		S0053: 3
HNHGB83	781205	5115	37 - 174	14867		S0053: 2
HNHGB96	784362	5116	123 - 233	14868		S0053: 2
HNHGC13	927065	5117	121 - 222	14869		S0053: 1 and S0216: 1.
HNHGC35	707337	5118	58 - 267	14870	Phe-17 to Arg-22, Tyr-31 to Ser-36, Gly-55 to Arg-70.	H0421: 1 and S0053: 1.
HNHGC41	711654	5119	3 - 224	14871	His-1 to Lys-6, Gly-24 to Ser-40, Ser-53 to Arg-58, Leu-68 to Ser-74.	S0053: 2
HNHGC62	733745	5120	478 - 654	14872		L0748: 4, S0053: 1 and H0187: 1.
HNHGD07	953416	5121	1 - 420	14873	Gly-1 to Gly-6, Ser-11 to Pro-19.	S0053: 2
HNHGD14	920149	5122	177 - 323	14874	Tyr-12 to Phe-24.	S0053: 2
HNHGD50	667930	5123	2 - 172	14875	Pro-5 to Pro-17, Pro-46 to Lys-51.	S0053: 2
HNHGD51	934632	5124	105 - 281	14876	Leu-3 to Arg-8.	S0216: 2 and S0053: 1.
HNHGD68	753053	5125	74 - 307	14877		S0053: 2
HNHGD84	671077	5126	165 - 332	14878		S0053: 2
HNHGE09	939727	5127	22 - 645	14879	His-8 to Gly-18, Glu-35 to Thr-41, Arg-53 to Asp-59, Glu-82 to Pro-94.	AR089: 1, AR061: 1 S0053: 2
HNHGE27	683432	5128	322 - 197	14880	Met-1 to Arg-6, Asn-36 to Ala-42.	S0052: 1 and S0053: 1.
HNHGE43	715304	5129	65 - 325	14881	Arg-46 to Lys-51.	S0053: 1 and S0216: 1.
HNHGE64	746605	5130	3 - 104	14882	Thr-15 to Glu-21, Ser-23 to Ser-32.	S0053: 2
HNHGF14	835984	5131	13 - 387	14883	Arg-6 to Pro-19.	S0053: 2
HNHGF21	670956	5132	54 - 251	14884	Arg-8 to Trp-14, Arg-18 to Ala-23,	S0053: 2

HNHGF37	708708	5133	164 - 331	14885	Leu-58 to Leu-63.	S0053: 2
HNHGF45	859852	5134	70 - 384	14886	Ala-23 to Gly-28.	S0053: 1 and S0216: 1.
HNHGF46	705128	5135	21 - 425	14887	Ser-28 to Glu-33.	S0052: 1 and S0053: 1.
HNHGF85	761811	5136	2 - 208	14888	Leu-12 to Ser-33, Ala-42 to Leu-48, Ser-57 to Pro-65. Ala-7 to Ala-17, Ser-32 to Gly-42, Glu-61 to Lys-69.	S0053: 1 and S0216: 1.
HNHGF90	730957	5137	2 - 280	14889	Leu-62 to Pro-69.	S0053: 2
HNHGF91	750389	5138	276 - 431	14890	Ala-40 to Thr-46.	S0052: 1 and S0053: 1.
HNHGG06	935530	5139	146 - 310	14891		S0053: 2 and L0748: 2.
HNHGG73	764446	5140	76 - 231	14892		S0053: 2
HNHGG76	746607	5141	1 - 198	14893	Asp-53 to Trp-63.	S0053: 3
HNHGG89	772213	5142	73 - 303	14894	Lys-12 to Arg-23.	S0053: 2
HNHGG93	792335	5143	22 - 195	14895	Gly-30 to Phe-38.	S0053: 1 and S0216: 1.
HNHGG95	760386	5144	1 - 411	14896	Arg-53 to Gln-62, Pro-79 to Ser-84.	S0053: 2
HNHGH02	920147	5145	3 - 257	14897	His-1 to Arg-9, Pro-44 to Gln-49.	S0052: 1 and S0053: 1.
HNHGH20	959499	5146	2 - 241	14898	Val-22 to His-42, Arg-57 to His-62, His-75 to Arg-80.	S0053: 2
HNHGH42	713036	5147	2 - 175	14899	Gly-26 to Gly-37.	S0053: 3
HNHGI35	707336	5148	124 - 303	14900	Pro-18 to Arg-27.	S0053: 2
HNHGI79	775218	5149	3 - 143	14901	Asp-13 to Trp-23.	S0053: 2
HNHGI81	576279	5150	157 - 345	14902		S0052: 2 and S0053: 1.
HNHGJ03	968076	5151	1 - 225	14903	Phe-69 to Ile-75.	S0053: 1 and S0216: 1.
HNHGJ09	625624	5152	193 - 312	14904	Ser-1 to Trp-9, Pro-15 to Glu-26.	S0053: 2
HNHGJ20	668916	5153	173 - 397	14905	Cys-4 to Leu-10, Pro-12 to Gly-21, Ile-31 to Asn-38.	S0053: 2
HNHGJ28	686733	5154	96 - 323	14906	Glu-34 to Thr-42.	S0053: 3
HNHGJ39	850088	5155	3 - 167	14907	Ala-1 to Leu-8.	H0402: 1 and S0053: 1.

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HNHGJ65	750269	5156	146 - 418	14908	Gly-26 to Ala-42, Thr-51 to Gly-58.	S0053: 2		
HNHGJ81	777958	5157	172 - 402	14909	Gln-12 to Ser-17.	S0053: 2		
HNHGK05	935525	5158	111 - 260	14910		S0053: 2		
HNHGK24	783674	5159	117 - 335	14911	His-2 to Gln-8, Pro-67 to Ala-73.	S0053: 1 and S0216: 1.		
HNHGK70	728593	5160	2 - 421	14912		S0053: 2	19q13.3-q13.4	113900, 126340, 126391, 130410, 134790, 138570, 160900, 173850, 191044, 258501, 600040, 600138, 602225, 602225
HNHGN17	663923	5161	139 - 273	14913		S0052: 1 and S0053: 1.		
HNHGO21	670955	5162	2 - 289	14914	Pro-45 to Glu-59, Gly-66 to Leu-73.	S0053: 2		
HNHGO65	750267	5163	3 - 92	14915		S0053: 2		
HNHGO68	732370	5164	106 - 324	14916	Arg-1 to Gly-9, Arg-17 to His-29, Met-40 to Arg-47, His-51 to Pro-61.	S0053: 2		
HNHGP08	859964	5165	2 - 97	14917	Arg-2 to Leu-11.	S0053: 2		
HNHGP31	698047	5166	3 - 284	14918	Ser-9 to Leu-15, His-57 to Cys-64, Glu-84 to Arg-94.	S0053: 2		
HNHGP32	699292	5167	161 - 268	14919	Gln-1 to Glu-6, Arg-20 to Met-25.	S0053: 2		
HNHGP40	916551	5168	233 - 391	14920	Ile-17 to Pro-26.	S0053: 2		
HNHGP73	934446	5169	8 - 163	14921		S0053: 1 and S0216: 1.		
HNHGP83	780328	5170	65 - 346	14922	Pro-31 to Gly-43, Leu-48 to Asn-57, Lys-87 to Ser-94.	S0053: 1 and S0216: 1.		
HNHGQ02	920146	5171	129 - 404	14923	Gln-35 to Gly-46, Ser-54 to Phe-59, Val-64 to Gly-74.	S0053: 3		
HNHGQ25	678151	5172	250 - 447	14924		S0053: 2		

HNHGQ28	859965	52 - 447	14925	Thr-58 to Cys-63, Ala-99 to Ser-104.	S0053: 2
HNHGQ49	573340	280 - 471	14926	Met-37 to Gln-44.	S0053: 2
HNHGQ79	562748	342 - 500	14927	Leu-22 to His-33, Ala-46 to Leu-53.	S0053: 2
	581933	348 - 506	19346	Leu-22 to His-33, Ala-46 to Leu-53.	
HNHGR35	698501	147 - 329	14928	Phe-4 to Ile-17.	S0053: 2
HNHGR43	918711	108 - 314	14929		S0053: 1 and S0216: 1.
HNHGS34	706671	97 - 435	14930	Gly-63 to Gln-69, Asp-84 to Ser-89, Val-103 to Asn-112.	S0053: 2
HNHGT37	708706	3 - 275	14931		S0053: 2
HNHGT51	859962	146 - 367	14932	Leu-6 to Gln-15.	S0053: 2
HNHGT64	725710	122 - 328	14933	Asn-1 to Leu-6.	S0053: 2
HNHGT74	765602	71 - 445	14934		S0053: 2
HNHGU19	668693	179 - 421	14935		S0053: 2
HNHGU41	791822	362 - 499	14936		S0053: 1 and S0216: 1.
HNHGU44	716634	61 - 264	14937		S0053: 2
HNHGU84	783041	18 - 56	14938		S0053: 2
HNHGU89	761837	161 - 355	14939	Ser-4 to Pro-11.	S0053: 2 and S0216: 1.
HNHGV18	666473	198 - 329	14940		S0053: 2
HNHGV22	674653	1 - 195	14941	Gly-1 to His-36.	S0053: 2
HNHGV29	421819	2 - 322	14942	Pro-35 to Leu-48.	S0053: 2
HNHGV45	754053	3 - 287	14943	His-1 to Lys-8.	S0053: 2
HNHGV91	706695	266 - 379	14944		S0053: 2
HNHGX33	496224	23 - 262	14945	Thr-1 to Ser-6, Pro-28 to Trp-37, Phe-51 to Ile-61.	S0053: 2
HNHGX40	687120	113 - 358	14946		S0053: 2
HNHGX41	711657	384 - 614	14947		S0052: 1 and S0053: 1.
HNHGX52	727175	47 - 385	14948	Pro-16 to Arg-25, Gln-31 to Pro-36, Ser-65 to Arg-75, Glu-77 to Val-82.	S0053: 2

Clone ID	Accession	Range	SEQ ID	Amino acids	Signal
HNHGX55	683523	71 - 310	14949	Phe-30 to Asp-36.	S0053: 2
HNHGX83	781196	3 - 251	14950		S0053: 1 and S0216: 1.
HNHGY13	657253	143 - 334	14951		S0053: 2
HNHGY17	663921	108 - 281	14952	Asp-1 to Pro-8, Leu-29 to Asp-35.	S0053: 2
HNHGY18	859951	175 - 423	14953	Pro-22 to His-39, Val-41 to Gly-48.	S0053: 2
HNHGY19	835531	2 - 349	14954	Asp-21 to Ser-27, Ser-76 to Ser-85.	S0053: 2
HNHGY26	859949	20 - 205	14955	Arg-6 to Cys-12, Leu-56 to Met-62.	S0053: 2 and S0216: 1.
HNHGY29	690666	87 - 368	14956	Arg-19 to Pro-33, Pro-39 to Ser-54.	H0271: 1 and S0053: 1.
HNHGY42	713797	1 - 243	14957	Leu-46 to Glu-55.	S0053: 2
HNHGY47	720360	45 - 374	14958	Asp-10 to Trp-15.	S0053: 2 and L0476: 1.
HNHGY79	775209	2 - 199	14959	Ala-1 to Lys-7, Leu-18 to Gln-35.	S0053: 2
HNHGY86	785516	129 - 1	14960		S0053: 2
HNHGY91	840129	209 - 433	14961	Gly-2 to Asn-11.	S0428: 1 and S0053: 1.
HNHGZ36	708131	2 - 85	14962	Ala-14 to Val-28.	S0053: 2
HNHGZ63	742594	209 - 421	14963		S0052: 1 and S0053: 1.
HNHHA21	496227	3 - 278	14964	Gly-59 to Asp-78.	S0053: 2
HNHHA32	669915	2 - 280	14965		H0271: 1 and S0053: 1.
HNHHA37	708709	2 - 166	14966	Pro-45 to Gln-54.	S0053: 2
HNHHA68	753047	258 - 497	14967		S0053: 1 and S0216: 1.
HNHHA91	790198	45 - 284	14968	Lys-14 to Cys-19.	S0053: 1 and S0216: 1.
HNHHB11	964993	61 - 159	14969	Asp-10 to Gly-18.	S0053: 2
HNHHB12	970719	107 - 247	14970	Thr-6 to Ser-20.	S0053: 2
HNHHB24	677224	141 - 332	14971		S0053: 2
HNHHB64	702697	354 - 614	14972	Lys-16 to Ser-31.	S0052: 1, S0053: 1, H0521: 1 and L0752: 1.
HNHHC12	967088	95 - 304	14973	Met-6 to Glu-13, Arg-15 to Trp-20.	S0053: 2
HNHHC17	860117	83 - 316	14974		S0053: 3
HNHHC29	713800	1 - 180	14975		S0053: 3 and L0589: 2.

HNHHC33	699291	5224	100 - 186	14976		S0053: 2
HNHHC36	707340	5225	159 - 37	14977	Cys-1 to Ile-11.	S0053: 3
HNHHC46	719068	5226	1 - 252	14978	Gln-14 to Met-19.	S0053: 2
HNHHC58	736069	5227	3 - 239	14979		S0053: 2
HNHHC83	781197	5228	35 - 439	14980	Asp-1 to Ala-6, Pro-23 to Leu-30.	S0053: 2
HNHHD35	707338	5229	41 - 190	14981	Ser-38 to Ser-48.	S0053: 2
HNHHD61	741837	5230	153 - 419	14982	Lys-21 to Pro-41.	S0053: 3
HNHHD67	751663	5231	152 - 319	14983	Thr-30 to Pro-40.	S0053: 3
HNHHD82	779893	5232	223 - 405	14984	Met-6 to Arg-12.	S0053: 3
HNHHE07	953408	5233	33 - 290	14985	Leu-11 to Glu-17.	S0053: 2
HNHHE48	630223	5234	100 - 312	14986		S0053: 2
HNHHE63	745100	5235	1 - 198	14987	Gly-1 to Arg-9, Ser-28 to Trp-33.	S0053: 2
HNHHE80	774041	5236	35 - 205	14988		S0053: 2
HNHHF01	916546	5237	3 - 320	14989	Asp-1 to Asn-10, Gly-18 to Trp-23, Gly-25 to Ser-33.	S0053: 2
HNHHF33	698502	5238	1 - 261	14990	Gly-1 to Ala-12, Pro-14 to Gly-21.	S0053: 2
HNHHF51	698490	5239	43 - 240	14991	Ala-1 to Pro-25.	S0053: 3
HNHHF56	496204	5240	2 - 217	14992	Tyr-7 to Phe-24.	S0053: 2
HNHHF58	859946	5241	80 - 247	14993		S0053: 3
HNHHF63	745095	5242	68 - 373	14994	Pro-35 to Gly-43.	S0053: 1 and S0216: 1.
HNHHF79	775205	5243	59 - 184	14995		S0053: 3
HNHHF96	796402	5244	144 - 1	14996		S0053: 3
HNHHG47	720361	5245	41 - 292	14997	Pro-25 to Pro-31.	S0053: 3
HNHHG50	724411	5246	2 - 247	14998		S0053: 2
HNHHG65	750266	5247	61 - 249	14999		S0053: 2
HNHHH13	657251	5248	56 - 223	15000	Ala-1 to Cys-9, Pro-51 to Ser-56.	S0053: 4
HNHHH42	713796	5249	28 - 225	15001		S0053: 2
HNHHH57	734793	5250	134 - 313	15002		S0053: 2
HNHHI10	964659	5251	3 - 188	15003		S0052: 1 and S0053: 1.
HNHHI28	859941	5252	1 - 351	15004	Gly-1 to Gly-18,	S0053: 2

HNHHI34	706699	37 - 171	15005	Asn-49 to Asn-72, Gly-86 to Gln-98.	S0053: 2
HNHHI36	708132	213 - 440	15006	Arg-17 to Thr-24.	S0140: 1 and S0053: 1.
HNHHI65	750263	171 - 386	15007	Glu-13 to Ser-20, Gln-42 to Thr-52.	S0053: 2
HNHHI72	510619	72 - 689	15008	Ile-3 to Lys-9, Leu-26 to Cys-31, Cys-39 to Gly-47.	S0052: 1 and S0053: 1.
HNHHK06	935517	192 - 431	15009	Thr-7 to Arg-18, Arg-42 to Leu-48, Arg-51 to Arg-59, Pro-61 to Ala-73.	H0635: 1, H0063: 1 and S0053: 1.
HNHHK39	937598	142 - 300	15010	Glu-16 to Tyr-25, Gln-69 to Thr-76.	S0053: 4
HNHHK46	718081	1 - 150	15011	Arg-15 to Leu-23, Lys-30 to Gln-53.	S0053: 2 and S0216: 1.
HNHHK62	741835	1 - 228	15012	Gly-1 to Thr-30.	S0053: 2
HNHHK74	765601	193 - 336	15013	Pro-23 to Leu-30.	S0053: 2
HNHHK84	781980	226 - 363	15014		S0053: 2
HNHHK93	792326	370 - 561	15015	Leu-1 to Gln-14.	S0053: 2 and S0216: 1.
HNHHL22	674617	164 - 310	15016	Arg-12 to Leu-19.	S0053: 2
HNHHL70	757201	107 - 322	15017	Arg-9 to Phe-15.	S0053: 3
HNHHL74	765598	53 - 181	15018		S0053: 2
HNHHL92	756587	3 - 134	15019	His-1 to Tyr-7, Thr-11 to Ser-17, Leu-33 to Cys-39.	S0053: 1 and S0216: 1.
HNHHM10	964656	76 - 207	15020	Pro-12 to Cys-20, Ser-23 to Asn-31.	S0053: 2
HNHHM17	661964	2 - 130	15021		S0053: 2
HNHHM25	678144	76 - 285	15022		S0053: 2
HNHHM28	575451	271 - 149	15023		L0666: 2, L0717: 1, H0057: 1, L0659: 1, S0053: 1 and L0748: 1.
HNHHM35	706667	158 - 334	15024	Asn-9 to Cys-16, Pro-19 to Ser-31,	S0053: 2

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HNHHHM37	708715	5273	20 - 160	15025	Asn-45 to Val-53.	S0053: 3
HNHHHM52	727166	5274	87 - 203	15026	Leu-17 to Leu-25, Asn-42 to Gly-47.	S0053: 2
HNHHHM55	694373	5275	69 - 377	15027	Val-17 to Ala-22, Pro-49 to Ser-55.	S0053: 4 and L0592: 1.
HNHHHM70	757202	5276	140 - 259	15028		S0053: 2
HNHHHM80	880776	5277	46 - 285	15029	Ser-17 to Gly-23.	S0053: 4
HNHHHN03	920129	5278	159 - 362	15030		S0053: 2 and S0428: 1.
HNHHHN07	953393	5279	109 - 285	15031		S0053: 2
HNHHHN11	964657	5280	3 - 254	15032		S0053: 3
HNHHHN19	668681	5281	71 - 268	15033	Gln-1 to Asp-7, Pro-13 to Pro-18, Ser-34 to Ser-43.	S0053: 3
HNHHHN31	698035	5282	1 - 117	15034		S0053: 2
HNHHHN62	745700	5283	1 - 150	15035	Pro-9 to Gly-23, Pro-27 to Thr-39.	S0053: 2
HNHHHN93	751659	5284	203 - 358	15036	Arg-24 to Ser-32, Pro-35 to Ser-42.	S0053: 6
HNHHHO08	953398	5285	214 - 330	15037		S0053: 3
HNHHHO15	424836	5286	2 - 169	15038	Asn-17 to Asn-28.	S0053: 2
HNHHHO49	722991	5287	101 - 280	15039		S0053: 2
HNHHHO66	727167	5288	77 - 259	15040	Ile-1 to Arg-10.	S0053: 2
HNHHHO79	774038	5289	1 - 159	15041		S0053: 4
HNHHHP02	920120	5290	2 - 142	15042	Arg-25 to Gly-32.	S0053: 2
HNHHHP04	935501	5291	26 - 241	15043		S0053: 5
HNHHHP16	661962	5292	91 - 357	15044	His-4 to Gly-9, Ser-13 to Arg-19, Thr-27 to Glu-32.	S0053: 2
HNHHHR04	935502	5293	13 - 129	15045		S0053: 4
HNHHHR46	720358	5294	137 - 346	15046	Arg-20 to Ala-26, Gly-28 to Thr-35, Ala-43 to Pro-55.	S0053: 4
HNHHHR61	741830	5295	75 - 230	15047	Pro-32 to Arg-38.	S0053: 2
HNHHHR93	775194	5296	65 - 235	15048		S0053: 3

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HNHHS46	956186	5297	514 - 684	15049	Leu-52 to Cys-57.	S0053: 2, S0114: 1, S0116: 1, H0580: 1, H0179: 1, H0271: 1, H0090: 1, H0264: 1, L0805: 1, L0527: 1 and L0367: 1.
HNHHS74	765584	5298	124 - 420	15050	Arg-3 to Ser-11.	S0053: 3
HNHHS76	788913	5299	188 - 313	15051	Thr-8 to Gly-16, Pro-19 to Asn-29, Gln-36 to Asn-42.	S0053: 3
HNHHS79	775192	5300	18 - 131	15052		S0053: 2 and S0216: 1.
HNHHT35	707342	5301	30 - 404	15053	Ser-8 to Gln-13.	S0053: 2
HNHHT55	465438	5302	3 - 431	15054	Asn-6 to Thr-11, His-35 to Ala-41.	S0053: 2
HNHHT70	783033	5303	2 - 193	15055	Ala-3 to Lys-17, Ser-41 to Gly-50.	S0053: 2
HNHHU46	465395	5304	3 - 287	15056	Ser-1 to Glu-6, Glu-9 to Leu-14, Asn-39 to Asn-46, Pro-65 to His-71.	S0053: 2
HNHHW01	859935	5305	55 - 420	15057	Asn-60 to Leu-66, Pro-70 to Val-93, Ile-101 to Leu-107.	S0053: 2
HNHHW32	699255	5306	100 - 207	15058		S0053: 2
HNHHW58	739288	5307	3 - 203.	15059	Ala-30 to Gln-39, Gly-57 to Thr-67.	S0053: 2
HNHHW61	742071	5308	1 - 159	15060		S0053: 2
HNHHW73	765588	5309	103 - 201	15061		S0053: 2
HNHIA02	920094	5310	2 - 496	15062	Pro-19 to Ala-25, Ala-53 to Pro-64, Arg-71 to Cys-77.	S0053: 2
HNHIA16	661931	5311	1 - 237	15063	Gly-13 to Lys-20, Cys-32 to Tyr-49, Glu-60 to Thr-70.	S0053: 2
HNHIA20	669685	5312	64 - 195	15064	Arg-20 to Leu-38.	S0053: 5
HNHIA34	706675	5313	204 - 10	15065		S0053: 2
HNHIA58	736046	5314	117 - 272	15066	Glu-1 to Gly-8.	S0053: 2

HNHIA64	745861	5315	112 - 360	15067		S0053: 2		
HNHIA73	559344	5316	10 - 270	15068	Ser-71 to Leu-76.	AR054: 9, AR051: 8, AR050: 8, S0053: 2		
	888195	9595	11 - 298	19347	Ser-71 to Leu-76.	S0053: 2		
HNHIA94	970720	5317	56 - 217	15069	Glu-35 to Gly-47.	S0053: 2		
HNHIA95	908419	5318	46 - 399	15070	Lys-8 to Pro-14, Asn-47 to Cys-52.	AR089: 7, AR061: 6, S0053: 4		
HNHIB22	967038	5319	2 - 169	15071	Glu-18 to Cys-24.	S0053: 4		
HNHIB56	734763	5320	1 - 207	15072	Gly-1 to Gln-8, Gly-21 to Pro-28.	S0053: 2		
HNHIB77	781214	5321	1 - 363	15073		S0053: 2 and S0052: 1.		
HNHIB94	793210	5322	14 - 238	15074	Ala-55 to Asp-69.	S0053: 3		
HNHIC39	705375	5323	271 - 423	15075	Arg-11 to Ser-17.	S0053: 2		
HNHIC46	842003	5324	243 - 434	15076	Trp-1 to Lys-10.	H0416: 1 and S0053: 1.		
HNHIC96	779876	5325	148 - 384	15077	Pro-41 to Trp-46.	S0053: 2		
HNHID29	690646	5326	37 - 243	15078	Pro-31 to Tyr-39.	S0053: 2		
HNHID53	727151	5327	155 - 409	15079	Pro-38 to Pro-43.	S0053: 2		
HNHID55	731761	5328	92 - 268	15080	Lys-19 to Tyr-25, Gln-48 to Glu-58.	S0053: 3		
HNHID79	774044	5329	3 - 371	15081	Gly-16 to Arg-22, Thr-53 to Ala-61.	S0053: 2		
HNHIE75	765585	5330	13 - 204	15082	Gln-22 to Gly-28.	S0053: 2		
HNHIE82	921945	5331	217 - 666	15083	Gly-1 to Ile-6, Pro-14 to Pro-19.	S0053: 3, L0365: 1 and S0052: 1.		
HNHIG01	916503	5332	2 - 244	15084	Arg-2 to Pro-9, Ser-11 to Lys-26, Ser-35 to Thr-50, Phe-74 to Asp-81.	S0053: 2		
HNHIG13	465404	5333	2 - 181	15085		S0053: 3	16p11.2	147781, 172471, 182381
HNHIG19	668657	5334	3 - 431	15086	Glu-2 to Gln-9, Ala-20 to Trp-27, Ser-44 to Ala-51, Pro-64 to Ser-69, Ala-76 to Pro-81.	S0053: 2		

HNHIG37	708713	5335	31 - 285	15087	Asn-39 to Arg-44.	S0053: 3
HNHIG68	753025	5336	284 - 412	15088		S0053: 2
HNHIG71	465407	5337	36 - 371	15089	Pro-78 to Arg-92.	S0053: 2
HNHIH23	675262	5338	2 - 244	15090	Asn-10 to Cys-17, Pro-19 to Arg-27, Glu-39 to Pro-45.	S0053: 3
HNHIH27	681727	5339	122 - 331	15091	His-37 to Lys-43.	S0053: 2
HNHIH29	689891	5340	16 - 195	15092	Glu-11 to His-22, Pro-31 to Gln-38.	S0053: 2
HNHIH46	720333	5341	128 - 415	15093		S0053: 2
HNHIH58	739290	5342	70 - 222	15094	Arg-8 to Lys-16, Pro-40 to Arg-51.	S0053: 2
HNHIH66	684531	5343	34 - 174	15095		H0271: 1 and S0053: 1.
HNHIH71	760371	5344	179 - 325	15096	Trp-24 to Ser-32.	S0053: 2
HNHIH73	765591	5345	3 - 236	15097	His-1 to Trp-10.	S0053: 2
HNHIH82	779874	5346	84 - 257	15098		S0053: 3
HNHIH96	734114	5347	153 - 422	15099		S0053: 1 and S0216: 1.
HNHIR84	775407	5348	100 - 246	15100		S0053: 2
HNHIS14	967087	5349	1 - 141	15101		S0053: 3
HNHIV95	795877	5350	69 - 290	15102		S0053: 1 and S0216: 1.
HNHIW13	657249	5351	77 - 403	15103	Thr-7 to Arg-14, Pro-33 to Ser-38, Gly-45 to Lys-75.	S0053: 2
HNHIW35	707339	5352	147 - 299	15104	Asn-3 to Trp-14, Gly-31 to Lys-39, Val-46 to Asp-51.	S0053: 2
HNHKH15	859926	5353	154 - 417	15105		S0216: 2
HNHKI60	739885	5354	302 - 93	15106	Ser-17 to Val-31.	S0216: 2
HNHKJ24	859923	5355	223 - 372	15107		S0216: 2
HNHKL72	761427	5356	115 - 225	15108		S0216: 2
HNHKL88	786555	5357	1 - 177	15109	Gly-6 to Leu-13.	S0216: 2
HNHKN73	762011	5358	51 - 443	15110	Asp-15 to Ser-20, Arg-40 to Gly-46.	AR061: 7, AR089: 4 S0216: 2
HNHKP30	793658	5359	1 - 138	15111		S0216: 2 and S0428: 1.
HNHKP48	721149	5360	167 - 358	15112	Gln-51 to Asp-62.	S0216: 2

HNHKP72	761432	5361	526 - 726	15113		S0216: 2
HNHKS69	750487	5362	92 - 241	15114	Ser-8 to Ala-15.	S0053: 1 and S0216: 1.
HNHKS75	766926	5363	79 - 324	15115	Thr-16 to Ala-24, Asn-33 to Asn-38.	S0216: 2
HNHKT06	934643	5364	30 - 137	15116	Ser-6 to Asn-18.	S0216: 2
HNHKT75	766924	5365	3 - 119	15117		S0216: 2
HNHKV67	751205	5366	205 - 375	15118	Lys-26 to Met-31.	S0216: 2
HNHKW47	786020	5367	14 - 193	15119	Glu-36 to Ser-45.	H0402: 1 and S0216: 1.
HNHKW76	767917	5368	42 - 290	15120	Pro-43 to Gln-50.	S0216: 1 and H0445: 1.
HNHKW81	761429	5369	247 - 504	15121	Gln-1 to Glu-6, Arg-22 to Gly-29.	S0216: 2
HNHKW83	780650	5370	1 - 531	15122	Gln-32 to His-37, Ala-63 to His-69, Pro-94 to Ala-110, Ser-136 to Gln-145.	S0216: 2
HNHKX10	963575	5371	251 - 409	15123		S0216: 3
HNHKX38	796804	5372	334 - 477	15124	Ser-1 to Lys-7, Glu-15 to Val-23.	S0002: 1 and S0216: 1.
HNHKX47	789625	5373	163 - 387	15125		S0428: 1 and S0216: 1.
HNHKX77	771530	5374	78 - 377	15126		S0216: 2
HNHKZ11	966164	5375	85 - 288	15127	Asn-35 to Leu-41, Tyr-45 to Phe-50, Thr-58 to Thr-67.	S0216: 2
HNHLA08	958422	5376	107 - 340	15128	Ser-15 to Leu-21.	S0428: 1 and S0216: 1.
HNHLA16	784264	5377	557 - 814	15129		L0764: 1, S0216: 1 and H0522: 1.
HNHLA55	754480	5378	1 - 420	15130	Ala-63 to Cys-71, Pro-80 to Gly-89, Pro-102 to Gly-116.	S0216: 2
HNHLA71	761430	5379	388 - 585	15131	Glu-10 to Glu-21, Ser-39 to Ala-44, Gly-48 to Met-53.	S0216: 2
HNHLA89	786461	5380	2 - 310	15132	Arg-16 to Gly-23, Trp-60 to Trp-65.	H0254: 1 and S0216: 1.
HNHLA90	970724	5381	241 - 609	15133	Gln-33 to Gly-42, Ala-59 to Arg-72,	S0052: 1, S0053: 1 and S0216: 1.

					Gly-95 to Ser-104.	
HNHLB08	958416	5382	92 - 268	15134	Gln-24 to Pro-30, Ser-52 to Gly-59.	S0216: 2
HNHLC69	754466	5383	84 - 356	15135	Ser-58 to Ala-66.	S0216: 2
HNHLD08	859857	5384	2 - 319	15136	Leu-38 to Gly-46, Leu-49 to Glu-56, Pro-64 to Ser-70.	S0216: 2
HNHLD13	805983	5385	208 - 378	15137	Gly-1 to Ser-6.	S0216: 2
HNHLD37	859859	5386	123 - 353	15138	Val-7 to Ser-15, Pro-29 to Ser-35.	S0053: 1 and S0216: 1.
HNHLD81	779345	5387	149 - 301	15139	Lys-3 to His-8.	S0216: 2
HNHLE72	966149	5388	130 - 246	15140		S0216: 2
HNHLF25	859856	5389	1 - 258	15141		S0053: 1 and S0216: 1.
HNHLF33	908449	5390	1 - 255	15142	Phe-5 to Gly-16, Thr-18 to Met-25, Lys-55 to Ser-63.	S0053: 1 and S0216: 1.
HNHLF58	859858	5391	3 - 233	15143	Thr-2 to Thr-12, Val-21 to Leu-36, Gln-49 to Ser-56.	S0216: 2
HNHLP56	883321	5392	100 - 213	15144		S0053: 1 and S0216: 1.
HNHLP69	754440	5393	73 - 180	15145		S0053: 1 and S0216: 1.
HNHLP77	967239	5394	176 - 466	15146		S0052: 1 and S0216: 1.
HNHLQ36	760460	5395	161 - 454	15147		S0053: 1 and S0216: 1.
HNHLQ61	795942	5396	119 - 289	15148		S0052: 1 and S0216: 1.
HNHLQ80	775621	5397	17 - 253	15149		H0179: 2 and S0216: 1.
HNHLR73	761855	5398	3 - 179	15150	Gly-53 to Cys-59.	S0216: 2
HNHLR91	789786	5399	160 - 276	15151		S0216: 2
HNHLS04	927077	5400	1 - 168	15152	Thr-18 to Gly-24, Asn-39 to Gly-49.	S0216: 2
HNHLS53	827329	5401	45 - 176	15153	Gly-28 to Val-34.	S0216: 2
HNHLT49	784983	5402	112 - 5	15154	Lys-1 to Gly-14.	S0216: 2
HNHLV84	782319	5403	99 - 230	15155		S0216: 2
HNHLW93	791782	5404	227 - 448	15156		S0002: 1 and S0216: 1.
HNHLX82	779298	5405	2 - 151	15157	Gln-37 to Lys-50.	S0216: 2
HNHMC78	772969	5406	200 - 319	15158		S0216: 2

HNHMD85	876673	5407	7 - 159	Tyr-6 to Gln-28.	S0053: 1 and S0216: 1.
HNHMN25	784479	5408	199 - 597	Pro-38 to Leu-47.	L0747: 2, S0052: 1 and S0216: 1.
HNHMQ93	791798	5409	32 - 145	Leu-17 to Asp-25.	S0216: 2
HNHMR04	927056	5410	100 - 420		S0053: 1 and S0216: 1.
HNHMR43	937561	5411	216 - 362		S0053: 1 and S0216: 1.
HNHMR73	967614	5412	240 - 428	Lys-7 to Ser-20, Ser-32 to Ser-37.	S0114: 1 and S0216: 1.
HNHMS77	916609	5413	1 - 144		S0053: 1 and S0216: 1.
HNHMS93	791807	5414	3 - 167	Arg-21 to Trp-28, Thr-30 to Gly-36.	H0421: 1 and S0216: 1.
HNHMT53	925689	5415	205 - 339		S0216: 2
HNHMT54	790765	5416	132 - 263	Phe-1 to Ser-12, Thr-18 to Thr-27.	S0428: 1 and S0216: 1.
HNHMT90	937564	5417	123 - 230		S0216: 2
HNHMU91	789785	5418	2 - 130	Thr-23 to Gln-28.	H0265: 1 and S0216: 1.
HNHMW83	780558	5419	30 - 257	Arg-3 to Asn-10, Lys-27 to Leu-32, Met-35 to Ile-41, Pro-47 to Asn-54.	S0053: 1 and S0216: 1.
HNHMX45	953411	5420	2 - 379		H0402: 1 and S0216: 1.
HNHMY43	859841	5421	1 - 225	Pro-19 to Gly-27.	S0216: 2
HNHMY45	958409	5422	24 - 239	Glu-25 to Cys-33.	S0216: 2
HNHMY59	883324	5423	113 - 400		S0216: 2
HNHMY71	761436	5424	3 - 236	Pro-31 to Gly-36.	S0216: 2
HNHMZ07	952290	5425	115 - 369	Gly-2 to Cys-10.	S0216: 2, L0361: 2 and L0742: 1.
HNHMZ59	761661	5426	165 - 278	Asn-7 to Glu-17, Ser-24 to Lys-31.	S0216: 1 and H0445: 1.
HNHMZ86	784999	5427	1 - 93		S0216: 2
HNHMZ89	786457	5428	146 - 313	Ala-22 to Lys-30.	S0216: 2
HNHNA02	918720	5429	73 - 228		S0053: 1 and S0216: 1.
HNHNA69	754452	5430	11 - 160		S0216: 2
HNHNB77	771523	5431	1 - 243	Ser-31 to Lys-36, Ser-76 to Ile-81.	S0053: 1 and S0216: 1.

HNHNC82	779321	5432	146 - 310	15184		S0216: 2
HNHND80	775612	5433	234 - 431	15185		S0053: 1 and S0216: 1.
HNHNE11	966146	5434	3 - 95	15186		S0216: 2
HNHNE59	771529	5435	190 - 351	15187		S0216: 3
HNHNE83	780628	5436	2 - 346	15188	Asp-1 to Arg-6, Gln-53 to Ser-60, Ile-66 to Lys-72, Glu-76 to Lys-85, Gly-91 to Ser-99.	H0271: 3, H0250: 2, H0635: 2, S0216: 2, H0254: 1, H0638: 1, H0069: 1, H0416: 1, H0090: 1, L0761: 1, L0800: 1, L0776: 1, L0789: 1 and S0052: 1.
HNHNG73	761849	5437	226 - 456	15189		S0052: 1 and S0216: 1.
HNHNI10	963571	5438	1 - 225	15190		S0116: 1 and S0216: 1.
HNHNI14	923079	5439	44 - 178	15191		S0216: 2
HNHNJ08	859837	5440	3 - 242	15192	Thr-23 to Thr-28, His-34 to Met-39, Val-69 to Arg-76.	S0053: 1 and S0216: 1.
HNHNK71	775635	5441	3 - 179	15193	Met-4 to Gly-9, Ser-12 to Leu-20.	S0216: 2
HNHNL70	756633	5442	147 - 341	15194		S0216: 2
HNHNN56	859834	5443	144 - 371	15195	Pro-38 to Gln-44.	L0368: 1, S0053: 1 and S0216: 1.
HNHNO84	782328	5444	140 - 253	15196		S0216: 1 and H0445: 1.
HNHNP80	775631	5445	54 - 185	15197		S0053: 1 and S0216: 1.
HNHNP86	784788	5446	122 - 334	15198		S0216: 2
HNHNU23	968911	5447	179 - 436	15199	Met-1 to Ala-12.	S0216: 2 and L0748: 1.
HNHNU27	920254	5448	272 - 424	15200	Tyr-9 to Arg-14, Glu-22 to Pro-34.	H0402: 1 and S0216: 1.
HNHNV52	859831	5449	82 - 213	15201	Arg-12 to Tyr-17.	S0216: 2
HNHNW64	859832	5450	1 - 222	15202	Lys-14 to Pro-19.	S0216: 2
HNHNX04	927027	5451	1 - 168	15203		S0216: 2
HNHNX88	959011	5452	2 - 157	15204		S0052: 1, S0428: 1, S0216: 1 and H0444: 1.
HNHOA03	923052	5453	122 - 457	15205		S0052: 1 and S0216: 1.
HNHOC03	922892	5454	164 - 280	15206		H0551: 1 and S0216: 1.
HNHOD01	915341	5455	28 - 219	15207	Arg-1 to Tyr-6,	S0052: 1 and S0216: 1.

					Leu-27 to Leu-41.	
HNHOD62	852995	5456	143 - 319	15208		H0589: 1, S0052: 1 and S0216: 1.
HNHOE53	767329	5457	285 - 422	15209		S0053: 1 and S0216: 1.
HNHOF03	922028	5458	3 - 197	15210	Ser-10 to Ser-15, Glu-44 to Phe-65.	T0041: 1, S0428: 1 and S0216: 1.
HNHOF07	952291	5459	90 - 326	15211	Lys-1 to Thr-18, Leu-28 to Arg-34, His-46 to Thr-59, Pro-62 to Gln-69.	T0041: 1, S0216: 1 and H0576: 1.
HNHOF92	790934	5460	158 - 358	15212	Gly-19 to Lys-29.	H0457: 1 and S0216: 1.
HNHOG84	782316	5461	331 - 543	15213	Lys-28 to Cys-37, Cys-41 to Pro-48, Leu-61 to Thr-69.	S0216: 2
HNHOG86	785004	5462	128 - 394	15214	Pro-1 to Ala-6, Pro-26 to Gly-31, Arg-50 to Leu-56, Ser-69 to Gly-76, Ala-80 to Glu-89.	S0216: 2
HNHOH10	963562	5463	298 - 558	15215	Tyr-28 to Ala-37.	S0216: 2
HNHOJ03	923072	5464	464 - 712	15216	Cys-15 to Leu-24.	S0216: 2 and L0749: 1.
HNHOM92	792328	5465	179 - 310	15217	Phe-12 to Arg-20.	H0402: 1 and S0216: 1.
HNHOO16	959616	5466	549 - 845	15218		H0423: 2, H0486: 1, S0216: 1 and L0753: 1.
HNHOO25	859826	5467	229 - 408	15219	Leu-12 to Asp-17, Lys-23 to Gln-29.	S0053: 1 and S0216: 1.
HNHOO74	915462	5468	24 - 467	15220	Thr-13 to Arg-22, Arg-78 to Pro-83.	H0254: 1, H0264: 1 and S0216: 1.
HNHOO87	787562	5469	72 - 260	15221	Glu-5 to Pro-11.	S0216: 2
HNHOP10	963539	5470	298 - 477	15222	Ala-1 to Trp-7, Lys-21 to Ala-28.	S0053: 1 and S0216: 1.
HNHOQ76	767877	5471	3 - 341	15223	Gly-1 to Trp-12, Lys-14 to Leu-19, Lys-52 to Ser-59.	S0216: 2
HNHOS70	756593	5472	3 - 323	15224	Met-19 to Gly-28, Gly-33 to Ser-51,	H0402: 1 and S0216: 1.

HNHOS75	766736	5473	246 - 377	15225	Asn-56 to Gly-63, Asp-83 to Tyr-88.	S0216: 2
HNHOT10	963631	5474	310 - 107	15226		S0216: 2
HNHOT11	923065	5475	258 - 482	15227		S0216: 2
HNHOT95	795331	5476	100 - 2	15228		S0216: 2
HNHOU20	773797	5477	28 - 138	15229	Ala-12 to Ser-18, Phe-31 to His-37.	S0053: 1 and S0216: 1.
HNHOU68	806090	5478	2 - 151	15230		S0216: 2
HNHOU94	793514	5479	1 - 282	15231	Gly-24 to Ser-31.	S0216: 2
HNHOX09	854882	5480	367 - 705	15232	Gly-1 to Ser-6, Pro-41 to Gly-48, Ser-79 to Arg-92, Pro-104 to Asn-112.	S0216: 2 and L0589: 1.
HNHOX10	963545	5481	2 - 307	15233	Pro-3 to Ser-15, Gly-57 to Gly-63, Ser-89 to His-99.	S0216: 3
HNHOX31	859820	5482	33 - 491	15234	Ser-38 to His-57.	S0216: 2
HNHOX89	786411	5483	30 - 254	15235	Lys-1 to Pro-8, Leu-11 to Phe-20.	S0216: 2
HNHOZ04	923013	5484	68 - 298	15236		S0216: 2
HNHOZ90	787488	5485	106 - 657	15237	Ser-27 to His-32, Pro-36 to Gly-41, Gly-49 to His-55, Trp-84 to Lys-96, Ser-118 to Gln-130, Pro-144 to Gly-157.	S0053: 1 and S0216: 1.
HNHPC08	952246	5486	28 - 198	15238	Arg-21 to Val-38, Ala-42 to Leu-47.	S0216: 2
HNHPC36	859819	5487	41 - 259	15239		S0216: 2
HNHPC72	772970	5488	38 - 340	15240	Arg-41 to Val-47, Ala-80 to Gln-89.	S0216: 2
HNHPD04	974103	5489	59 - 325	15241	Gly-1 to Val-8, Phe-12 to Arg-30, Arg-43 to His-58, Gln-60 to Val-66,	S0053: 2 and S0216: 1.

HNHPD07	952244	5490	174 - 389	Leu-83 to Glu-88.	S0216: 2
HNHPD13	859815	5491	2 - 322	Gln-23 to Lys-33. His-46 to Cys-51, Pro-61 to Leu-67, Thr-76 to Ser-81, Pro-83 to Cys-89.	S0216: 2
HNHPE86	784919	5492	3 - 311		S0216: 2
HNHPG61	784432	5493	27 - 458	Ala-1 to Gly-13, Gln-48 to Ser-60, His-80 to Ser-85.	S0052: 1 and S0216: 1.
HNHPG66	859812	5494	299 - 484.	Cys-18 to His-23.	S0428: 1 and S0216: 1.
HNHPG85	783821	5495	185 - 367	Ile-33 to Leu-38.	S0053: 1 and S0216: 1.
HNHPH29	934456	5496	233 - 451	Ser-33 to Lys-38, Arg-45 to Thr-51.	S0216: 2
HOIAE91	935322	5497	101 - 520	Ser-30 to Phe-37, Ser-39 to Leu-45, Asp-53 to Thr-60, Glu-74 to Gly-79, Gly-86 to Lys-100, Gln-106 to Ser-124.	H0250: 3, S3016: 1, H0402: 1, H0625: 1, L0509: 1, L0791: 1, S0292: 1, H0521: 1, H0436: 1 and S3020: 1.
HPSAA31	739041	5498	29 - 280	Tyr-1 to Lys-9, Glu-29 to Ser-36, Ser-52 to Asn-60.	H0305: 2, H0589: 1 and H0074: 1.
HPSAA50	723558	5499	70 - 297	Gln-1 to Lys-6, Gly-18 to Asp-24.	H0074: 2
HPSAA63	536776	5500	87 - 182		H0074: 3
HPSAB25	677474	5501	275 - 192		H0074: 2
HSATA03	925082	5502	49 - 174		S0114: 1 and H0264: 1.
HSATA86	683251	5503	78 - 227	Ser-1 to Gln-11, Ile-36 to Glu-50.	S0114: 2 and L0748: 2.
HSATE44	666207	5504	129 - 338	His-4 to Gln-9, Gly-32 to Ser-42.	S0114: 1 and H0318: 1.
HSATE89	531280	5505	148 - 375	Leu-5 to Lys-12, Lys-27 to Arg-32.	S0114: 2
HSATF05	907593	5506	15 - 200	Glu-1 to Ser-7, Thr-17 to Ser-24.	S0114: 1, H0306: 1 and L0761: 1.

HSATF79	781718	5507	2 - 205	15259		S0114: 1 and H0521: 1.
HSATJ56	716434	5508	240 - 404	15260		S0114: 1 and H0445: 1.
HSATJ84	781405	5509	196 - 315	15261		S0114: 2 and L0748: 1.
HSATM25	688006	5510	173 - 418	15262		S0114: 1 and H0436: 1.
HSATM79	677717	5511	3 - 437	15263	Pro-39 to Lys-54.	S0114: 1 and H0591: 1.
HSATQ28	866951	5512	3 - 164	15264		AR089: 120, AR061: 12 S0114: 2, H0422: 2 and L0748: 1.
HSATQ76	765376	5513	319 - 582	15265	Val-6 to Leu-23.	S0114: 1, H0581: 1 and L0756: 1.
HSATR17	888871	5514	255 - 389	15266		AR051: 5, AR054: 3, AR050: 0 S0114: 1 and H0272: 1.
HSATR27	713143	5515	1 - 180	15267	Arg-7 to Gly-12.	S0114: 3
HSATR32	699586	5516	2 - 256	15268		S0114: 2 and H0581: 1.
HSATR76	659994	5517	120 - 305	15269		H0445: 2, S0114: 1 and L0745: 1.
HSATS23	524369	5518	19 - 123	15270		S0114: 2
HSATS29	689823	5519	116 - 214	15271		S0114: 1 and H0444: 1.
HSATS56	732640	5520	63 - 242	15272	Thr-38 to Ser-47.	S0114: 1 and H0576: 1.
HSATT96	796565	5521	252 - 422	15273	Tyr-14 to Ser-25.	S0114: 1 and H0318: 1.
HSATV34	732184	5522	459 - 325	15274		S0114: 1 and H0423: 1.
HSATW22	531171	5523	138 - 266	15275		S0114: 2, L0758: 2, L0041: 1, L0659: 1 and L0747: 1. 5
HSATX46	866959	5524	2 - 250	15276	Glu-12 to His-20.	S0114: 2 and S0426: 1.
HSAUA88	757624	5525	86 - 313	15277	Gly-9 to Asn-15, Glu-29 to Phe-41, Trp-65 to Cys-70.	S0114: 1 and H0422: 1.
HSAUB19	954055	5526	112 - 204	15278	Arg-11 to Ser-17, Ser-24 to Cys-29.	S0114: 2
HSAUB90	733714	5527	3 - 131	15279		H0265: 1 and S0114: 1.
HSAUD05	932502	5528	1 - 183	15280	Ser-6 to Glu-11.	S0114: 2 and H0264: 1.
HSAUD45	531170	5529	1 - 237	15281		S0114: 1 and S0053: 1.
HSAUE25	571385	5530	64 - 177	15282	Leu-26 to Cys-33.	S0114: 1 and S0134: 1.
HSAUE40	866933	5531	124 - 405	15283		S0114: 2

HSAUF18	527038	5532	17 - 328	15284	Leu-16 to Pro-22.	S0114: 1, H0179: 1, S0052: 1 and L0751: 1.
HSAUG15	953628	5533	690 - 836	15285	Lys-18 to Ile-23.	L0766: 3, S0114: 1, H0063: 1, L0761: 1, L0805: 1, L0776: 1, L0527: 1 and L0744: 1.
HSAUH65	953873	5534	177 - 278	15286		S0114: 2
HSAUH69	870437	5535	528 - 758	15287	Leu-1 to Cys-6.	L0766: 4, L0740: 4, L0777: 2, S0114: 1 and S0134: 1.
HSAUI05	856886	5536	156 - 368	15288		S0114: 1 and H0254: 1.
HSAUJ26	950714	5537	110 - 211	15289		S0114: 1 and H0551: 1.
HSAUL67	866919	5538	204 - 380	15290		S0114: 1 and H0254: 1.
HSAUQ94	526936	5539	82 - 192	15291	His-6 to Ser-12, Asn-24 to Asn-32.	S0114: 3
HSAUT77	557848	5540	2 - 163	15292	Arg-31 to Gly-37.	S0114: 2
HSAUW10	967600	5541	121 - 360	15293	Leu-6 to Gly-12, Pro-14 to Ser-20, Thr-38 to Ile-46.	S0114: 2
HSAUW71	537544	5542	77 - 274	15294	Ser-1 to Thr-6.	S0114: 2
HSAUZ38	744899	5543	215 - 463	15295	Gly-58 to Gly-66.	S0114: 3, H0445: 3, L0002: 1 and L0803: 1.
HSAUZ57	685253	5544	388 - 579	15296		S0114: 2, H0402: 1 and L0748: 1.
HSAVA44	866900	5545	1 - 210	15297	His-22 to Thr-28.	S0114: 2
HSAVA61	742073	5546	1 - 153	15298	Phe-8 to His-16.	S0114: 1, H0087: 1 and L0731: 1. 2
HSAVB05	932496	5547	41 - 157	15299		S0114: 1 and S0116: 1.
HSAVB19	866899	5548	5 - 322	15300	Arg-1 to Pro-13, Ala-40 to Gly-49.	S0114: 2
HSAVC41	584978	5549	1 - 132	15301	Thr-1 to Asp-10.	S0114: 2
HSAVC76	967286	5550	173 - 325	15302		S0114: 1 and S0134: 1.
HSAVF35	932462	5551	84 - 257	15303	Asp-25 to Phe-35.	H0265: 1 and S0114: 1.
HSAVG81	959949	5552	335 - 547	15304	Leu-41 to Phe-47, Val-51 to Arg-59.	S0114: 2; H0439: 1, L0794: 1, L0777: 1 and L0599: 1.
HSAVH17	417452	5553	37 - 186	15305	Cys-34 to Thr-39.	S0114: 2
HSAVH95	574243	5554	142 - 273	15306		S0114: 1, H0318: 1 and

L0749: 1.

HSAVI44	715837	5555	82 - 225	15307	Lys-1 to Ser-6.	S0114: 1 and H0445: 1.
HSAVI46	717837	5556	245 - 460	15308	Tyr-11 to Trp-18, Arg-41 to Val-53.	S0114: 1 and S0002: 1.
HSAVI59	579060	5557	110 - 376	15309		S0114: 1 and H0063: 1.
HSAVI77	739521	5558	1 - 177	15310		S0114: 2
HSAVL43	714418	5559	174 - 503	15311	Phe-34 to Cys-39, Pro-77 to Tyr-82, Arg-105 to Arg-110.	L0748: 6, L0749: 2, S0114: 1 and S0426: 1.
HSAVN07	935797	5560	81 - 233	15312	Lys-8 to Arg-15, Thr-21 to Lys-36.	S0114: 1, H0402: 1 and L0521: 1.
HSAVN17	920412	5561	221 - 430	15313	Ser-11 to Cys-21.	S0114: 1 and H0445: 1.
HSAVO37	574709	5562	2 - 265	15314	Gly-1 to Ser-18.	H0556: 1, S0114: 1 and H0090: 1.
HSAVO53	531111	5563	115 - 249	15315		S0114: 2
HSAVO82	531398	5564	131 - 60	15316		S0114: 1 and H0179: 1.
HSAVP10	964950	5565	240 - 416	15317		S0114: 2
HSAVQ46	574784	5566	3 - 254	15318	Ala-1 to Arg-18.	S0114: 1, H0271: 1 and L0657: 1.
HSAVQ56	522431	5567	75 - 347	15319		S0114: 2
HSAVR06	936049	5568	11 - 91	15320		S0114: 2
HSAVR74	827090	5569	2 - 112	15321	Lys-22 to Lys-27.	S0114: 2
HSAVS17	574269	5570	3 - 71	15322	Gln-2 to Thr-13.	S0114: 2
HSAVS46	526756	5571	1 - 249	15323		S0114: 2
HSAVS76	866888	5572	2 - 94	15324	Gln-7 to Ser-19.	S0114: 2
HSAVT18	920565	5573	107 - 328	15325		S0114: 1 and H0305: 1.
HSAVT24	577549	5574	175 - 474	15326		S0114: 3, L0776: 1, H0521: 1 and H0423: 1.
HSAVT95	925582	5575	38 - 232	15327	Glu-39 to Lys-47.	S0114: 1, H0306: 1 and L0527: 1.
HSAVU11	967490	5576	17 - 142	15328		S0114: 2
HSAVU14	920695	5577	91 - 378	15329		S0114: 2
HSAVW44	574267	5578	333 - 455	15330		S0114: 2
HSAVX96	744614	5579	49 - 282	15331	Gln-4 to Lys-16.	S0114: 1 and H0580: 1.
HSAVY34	574287	5580	3 - 221	15332	Arg-34 to Glu-40.	S0114: 3 and S0134: 1.

HSAVY58	526958	5581	36 - 176		S0114: 2 and H0264: 1.
HSAVZ35	842039	5582	239 - 364		H0159: 1 and S0114: 1.
HSAVZ65	574192	5583	158 - 328		S0114: 2
HSAWA25	577281	5584	16 - 177	Asn-14 to His-21.	H0445: 2, S0114: 1 and L0766: 1.
HSAWC89	785988	5585	116 - 913	Asn-18 to Leu-23, Tyr-41 to Gly-46, Asp-101 to Asp-110.	H0265: 1, S0114: 1, H0421: 1 and L0596: 1.
HSAWG75	574223	5586	58 - 159		S0114: 1 and H0318: 1.
HSAWH47	720535	5587	328 - 522	Leu-1 to Cys-7, Phe-55 to Trp-61.	S0114: 1, H0638: 1 and L0748: 1.
HSAWI18	666842	5588	150 - 335	Tyr-35 to Ser-41.	S0114: 1, H0444: 1 and H0543: 1.
HSAWI50	742713	5589	2 - 226	Val-7 to Val-15.	S0114: 1 and H0607: 1.
HSAWJ36	866874	5590	478 - 837	Thr-1 to Lys-12.	S0114: 2, L0743: 2, L0638: 1, L0800: 1, L0659: 1, L0758: 1 and L0759: 1.
HSAWJ93	751429	5591	2 - 148	Val-10 to His-15, Val-35 to Leu-40.	S0114: 1 and H0444: 1.
HSAWL80	792893	5592	187 - 324		S0114: 2
HSAWN67	883825	5593	189 - 665		S0114: 1 and H0436: 1.
HSAWT91	522474	5594	104 - 178		S0114: 1 and S0053: 1.
HSAWU96	577267	5595	147 - 257		S0114: 1, H0444: 1 and H0445: 1.
HSAWV18	666841	5596	5 - 103		S0114: 1, H0305: 1 and L0766: 1.
HSAWY11	967489	5597	237 - 365		S0114: 1 and H0445: 1.
HSAXB47	720536	5598	3 - 578	Gly-15 to Phe-21, Asp-79 to Glu-93, Gly-103 to Phe-111.	S0114: 1, S0426: 1 and H0521: 1.
HSAXB84	574172	5599	117 - 416	Asp-8 to Cys-20, Arg-41 to Asp-58.	S0114: 2
HSAXB95	796006	5600	2 - 328	Pro-4 to Pro-11.	S0114: 1 and S0216: 1.
HSAXC60	579044	5601	122 - 286		S0114: 1, S0134: 1 and H0457: 1.
HSAXD03	924900	5602	162 - 254		S0114: 2

HSAXD08	959939	155 - 283	15355	Pro-11 to Thr-20.	S0114: 1 and H0341: 1.		
HSAXD18	575543	97 - 2	15356		S0114: 4		
HSAXD73	574274	178 - 396	15357	Lys-12 to Leu-17, Glu-53 to Cys-61.	S0114: 2 and L0754: 1.		
HSAXD75	526777	177 - 332	15358	Gly-29 to Asp-36.	S0114: 2		
HSAXF03	924899	34 - 222	15359		S0114: 2 and L0766: 1.		
HSAXG18	574165	190 - 297	15360		S0114: 1 and H0090: 1.		
HSAXG30	574280	3 - 236	15361	Ser-40 to Ser-47.	S0114: 2		
HSAXI07	953871	16 - 105	15362		S0114: 2	7q31.1-q31.2	126650, 126650, 150240, 180105, 222800, 246900, 602421, 602421, 602421
HSAXI47	574159	340 - 456	15363		S0114: 1 and H0063: 1.		
HSAXI62	531114	59 - 211	15364	His-37 to Pro-51.	S0114: 2		
HSAXJ25	964753	38 - 184	15365	Lys-26 to Ser-32.	S0114: 1, L0748: 1 and H0445: 1.		
HSAXL83	866840	1 - 138	15366	Thr-30 to Ala-36.	S0114: 2		
HSAXM33	866837	1 - 291	15367	Ile-18 to Pro-25, Val-33 to Gln-42, Phe-46 to Val-51, Pro-82 to Asp-97.	S0114: 2		
HSAXM34	526939	3 - 254	15368	Gly-14 to His-26.	S0114: 2 and S0116: 1.		
HSAXM44	574173	1 - 150	15369		S0114: 2		
HSAXM68	754061	167 - 322	15370		S0114: 2		
HSAXM91	784470	120 - 221	15371	Asp-27 to Ser-34.	S0114: 2		
HSAXN51	574286	188 - 445	15372	Pro-34 to Lys-47.	S0114: 2, S0216: 2 and S0134: 1.		
HSAXO52	726053	419 - 547	15373	Gln-32 to Asn-37.	S0114: 1, L0586: 1 and H0423: 1.		
HSAXO53	727491	2 - 130	15374	Ile-1 to Leu-11, Glu-31 to Thr-37.	H0186: 1 and S0114: 1.		
HSAXO65	713784	45 - 248	15375		S0114: 2		
HSAXP51	725673	194 - 319	15376	Thr-3 to Arg-12, Arg-29 to Glu-35.	S0114: 2 and H0581: 1.		
HSAXR08	959441	192 - 521	15377	Leu-3 to Ser-9,	L0748: 2, S0114: 1, H0581:		

				Gly-105 to Ala-110.	1 and L0367: 1.
HSAXR83	866831	33 - 362	15378	Pro-16 to Lys-21.	S0114: 1 and H0305: 1.
HSAXS44	715896	2 - 148	15379	Lys-30 to Phe-41.	S0114: 2
HSAYA60	650857	1 - 342	15380	Gly-1 to Ala-6.	S0114: 2
HSAYA80	751139	145 - 522	15381	Ala-1 to Gly-8, Ala-19 to Pro-36.	S0114: 2
HSAYA95	856883	145 - 339	15382		S0114: 1, H0254: 1, H0255: 1 and S0002: 1.
HSAYC17	663910	170 - 376	15383	Glu-44 to Ser-55, Thr-63 to Lys-68.	S0114: 1, L0309: 1 and H0445: 1.
HSAYC39	705409	147 - 374	15384	Lys-2 to Arg-7, Gln-13 to Trp-24, Ser-37 to Thr-44.	S0114: 1 and H0436: 1.
HSAYC84	723425	219 - 437	15385		S0114: 1, H0318: 1, L0803: 1, L0748: 1 and L0754: 1.
HSAYG62	745692	75 - 275	15386		S0114: 2
HSAYH09	971427	3 - 206	15387	Arg-22 to Gly-28, Pro-41 to Pro-48, Gly-56 to Ser-67.	S0114: 4, H0556: 1 and H0187: 1.
HSAYH38	731434	451 - 687	15388	Ala-20 to Gly-36.	S0114: 1, H0305: 1 and H0589: 1.
HSAYK03	881282	3 - 443	15389	His-1 to His-6, Thr-26 to Ser-31, Pro-92 to Val-97, Gly-114 to Gly-122.	S0114: 1 and H0305: 1.
HSAYK26	681730	175 - 357	15390	Ser-24 to His-34.	S0114: 2
HSAYK79	699056	153 - 266	15391	Ser-1 to Asp-30.	S0114: 1 and H0444: 1.
HSAYL46	720352	266 - 448	15392		S0114: 2 and L0749: 1.
HSAYL64	765847	2 - 136	15393		S0114: 2 and H0591: 1.
HSAYL72	951025	70 - 237	15394		S0114: 1 and S0134: 1.
HSAYL93	920778	49 - 291	15395	Arg-8 to Pro-16, Leu-19 to Asn-28.	S0114: 1 and H0264: 1.
HSAYM75	719241	3 - 116	15396		S0114: 1 and H0318: 1.
HSAYM91	959486	86 - 232	15397	Lys-8 to Cys-13.	S0114: 2
HSAYN79	471037	276 - 434	15398	Gln-5 to Leu-13.	S0114: 1, S0002: 1, S0426: 1 and H0543: 1.

Clone	Number	SEQ ID	Range	SEQ ID NO	Amino acid	Additional
HSAYO71	745703	5647	156 - 329	15399	Pro-21 to Gln-31.	S0114: 2
HSAYR35	675897	5648	75 - 191	15400		S0114: 2
HSAYS26	681725	5649	3 - 170	15401		S0114: 2 and L0794: 1.
HSAYS54	730688	5650	242 - 433	15402	Ser-8 to Val-13.	S0114: 1, L0772: 1, L0766: 1 and H0423: 1.
HSAYW12	856909	5651	87 - 257	15403	Ser-34 to Met-46.	S0114: 1, H0255: 1 and H0423: 1.
HSAYW75	866818	5652	1 - 189	15404	Gly-1 to Ser-6, Ala-32 to Asp-44.	S0114: 1 and H0576: 1.
HSAZC11	964994	5653	27 - 206	15405	Glu-46 to Leu-51.	S0114: 2
HSAZC18	666442	5654	92 - 220	15406		S0114: 2
HSAZC33	702423	5655	166 - 270	15407		S0114: 3
HSAZC41	712326	5656	148 - 285	15408	Pro-28 to Val-34.	S0114: 2
HSAZC69	757577	5657	85 - 231	15409		S0114: 2
HSAZC70	866814	5658	2 - 238	15410		S0114: 3 and H0402: 1.
HSAZC72	509611	5659	196 - 366	15411	Thr-1 to Ala-6.	S0114: 3
HSAZC91	790196	5660	122 - 286	15412		S0114: 2
HSAZD30	692708	5661	161 - 313	15413		S0114: 2
HSAZE47	887420	5662	77 - 517	15414	His-10 to Ile-16, Arg-27 to Ser-34, Arg-44 to Asn-49, Tyr-77 to Cys-89.	AR050: 2, AR054: 1, AR051: 1 S0114: 2
HSAZE66	725704	5663	2 - 247	15415		S0114: 1 and S0052: 1.
HSAZF25	787070	5664	3 - 257	15416	Leu-75 to Leu-81.	S0114: 2
HSAZF47	719615	5665	306 - 425	15417		S0114: 1 and H0445: 1.
HSAZG04	927161	5666	1 - 180	15418	Glu-1 to His-6, Ser-35 to Ala-41, His-52 to Cys-59.	S0114: 2
HSAZG53	727729	5667	24 - 131	15419		S0114: 1 and H0318: 1.
HSAZH64	730784	5668	165 - 347	15420	Arg-1 to Gln-8.	S0114: 1 and H0402: 1.
HSAZI04	927167	5669	27 - 191	15421		S0114: 1 and H0521: 1.
HSAZK83	781717	5670	1 - 117	15422		S0114: 2
HSAZN07	847802	5671	158 - 370	15423		S0114: 1 and H0421: 1.
HSAZP34	796044	5672	214 - 357	15424	Gly-20 to Glu-31.	S0114: 2
HSAZQ04	927174	5673	2 - 187	15425	Phe-42 to Glu-49.	H0589: 2 and S0114: 1.

HSMBA04	927420	5674	43 - 180	15426	Asp-1 to Gln-7, Arg-25 to Ile-32, Gln-37 to Gly-46.	S0298: 1 and S0052: 1.		
HSMBA53	727597	5675	130 - 195	15427		S0298: 2		
HSMBB53	964887	5676	2 - 100	15428		S0298: 1 and H0402: 1.		
HSMBD29	690390	5677	412 - 215	15429		S0298: 1, H0581: 1 and H0542: 1.		
HSQFR23	676362	5678	94 - 291	15430	Asn-28 to Ser-35, Arg-58 to Pro-66.	H0641: 2, S0002: 2, L0766: 2, L0438: 2, L0439: 2, H0657: 1, H0638: 1, H0637: 1, L0763: 1, L0768: 1, L0794: 1, L0655: 1, H0521: 1, H0522: 1, L0779: 1, L0777: 1 and S0026: 1.		
HSYAD19	668590	5679	52 - 132	15431		H0551: 2	8q11	600899
HSYBC05	920174	5680	215 - 385	15432	Asp-11 to His-16, Asn-41 to Ser-47.	H0341: 1, H0402: 1, S0005: 1, H0551: 1 and L0766: 1.		
HSYBF51	883699	5681	2 - 334	15433	Leu-12 to Gly-31.	H0551: 2	6q23	
HSYBL15	660053	5682	2 - 286	15434	Pro-26 to Gly-32.	AR061: 1, AR089: 0 S0212: 1, H0551: 1 and L0366: 1.		107470, 107470, 107470, 121014, 142470, 156225, 164200, 164200, 207800, 601316, 601410, 601757, 602067
HSYBL77	727842	5683	142 - 327	15435	Ser-7 to Asp-12, Arg-30 to Ser-41.	H0341: 1 and H0551: 1.		
HSYCX75	870939	5684	60 - 191	15436		H0551: 2		
HSYDF85	783730	5685	1 - 399	15437	Ser-79 to Gly-86, Pro-93 to Asp-99.	H0069: 1 and H0551: 1.		
HSYDP04	970789	5686	23 - 403	15438	His-3 to Ala-10, Gly-22 to Glu-29, Pro-53 to Pro-59, Leu-106 to Glu-111, Glu-119 to Asn-125.	H0457: 4, H0522: 2 and H0551: 1.		
HT1SC71	792728	5687	96 - 326	15439		H0218: 3		

						Chromosome	
HT2AB63	518444	5688	66 - 263	Gln-59 to Lys-66.	H0139: 2		
HT2SA18	522773	5689	201 - 443	Ser-34 to Ala-40, Asn-61 to Ala-70.	H0220: 2, L0748: 1 and L0749: 1.		
HT2SF05	932853	5690	231 - 467		H0220: 1 and S0053: 1.		
HT2SF45	522759	5691	120 - 320		H0220: 2		
HT2SG56	870913	5692	87 - 320		H0556: 1 and H0220: 1.		
HT2SG66	522753	5693	171 - 305	Lys-12 to Ile-25.	H0220: 2		
HT3AG28	973645	5694	57 - 209	Tyr-1 to Glu-19.	H0140: 3		
HT3AH13	527913	5695	17 - 175	Arg-2 to His-13.	H0140: 2 and L0369: 1.		
HT3BA84	509190	5696	266 - 412		H0159: 2, H0222: 1 and H0422: 1.		
HT3BB93	530750	5697	165 - 266		H0222: 1 and H0159: 1.		
HT3BC30	691009	5698	88 - 201	Arg-14 to Lys-30.	H0223: 1 and H0159: 1.		
HT3BF34	534887	5699	67 - 189		H0222: 1, H0159: 1, H0179: 1 and S0053: 1.		
HT3BG05	932557	5700	3 - 365	Leu-18 to Gln-25.	H0222: 1 and H0159: 1.		
HT3BG34	527779	5701	80 - 166		H0159: 2		
HT3SA07	954360	5702	19 - 210	Val-3 to Leu-9, Lys-14 to Thr-19, Trp-27 to Ser-32.	H0222: 1 and H0264: 1.		
HT3SB56	958400	5703	601 - 912	Phe-27 to Arg-34.	H0222: 1 and H0159: 1.	16p13.13-p13.12	186580, 278760, 601313
HT3SF46	522600	5704	181 - 312		H0222: 1 and H0159: 1.		
HT3SF93	791423	5705	207 - 527	Gly-7 to Met-20, Pro-28 to Leu-33, Met-52 to Cys-58, Arg-92 to Ser-97.	H0222: 1, S0428: 1 and L0601: 1.		
HT3SG30	522532	5706	127 - 258		H0222: 3, H0576: 1 and L0779: 1.		
HT4CF32	887174	5707	133 - 846	Gly-1 to Val-16, Thr-114 to Arg-119.	AR050: 48, AR054: 34, AR051: 20 H0141: 5, H0585: 5, L0805: 2, H0638: 1, H0606: 1, L0369: 1, L0761: 1, L0800: 1, L0771: 1, L0768: 1, L0766: 1 and L0806: 1.		

HT4CL83	974117	5708	178 - 489	15460	Val-18 to Thr-23, Val-42 to Trp-49, Glu-65 to Tyr-70.	H0585: 6 and H0141: 2.
HT4CM20	805558	5709	195 - 449	15461		H0585: 8 and H0141: 3.
HT4FN75	686279	5710	2 - 127	15462		H0585: 2
HT4FS23	952837	5711	2 - 178	15463		H0585: 2
HT4FV06	935056	5712	1 - 87	15464	Leu-2 to Pro-8.	H0585: 1 and H0576: 1.
HT4GF30	870887	5713	6 - 245	15465	Thr-14 to Arg-23, Gly-37 to Phe-50.	H0585: 17, H0141: 7, L0804: 4, H0641: 2, L0769: 2, L0800: 2, L0803: 2, L0809: 2, L0731: 2, L0763: 1, L0761: 1, L0773: 1, L0789: 1, L0747: 1, L0777: 1 and H0422: 1.
HT4GJ85	909971	5714	38 - 526	15466	Gly-115 to Arg-120.	H0585: 9
HT4SB45	522502	5715	118 - 399	15467		H0224: 3
HT4SE86	531561	5716	50 - 235	15468		H0224: 1, H0160: 1 and H0225: 1.
HT4TB12	870955	5717	2 - 277	15469		H0225: 2, H0224: 1 and H0160: 1.
HT5AD70	960050	5718	3 - 167	15470		H0167: 4
HT5AH76	921539	5719	2 - 133	15471		H0167: 3
HT5AI96	728624	5720	2 - 88	15472		H0167: 2
HT5EA69	952359	5721	12 - 488	15473	Arg-9 to Trp-20, Met-27 to Gly-33, Gln-52 to Ile-57, Gln-60 to Glu-69.	H0584: 10
HT5EU04	531205	5722	268 - 435	15474	Phe-1 to Glu-11, Gly-17 to Arg-41.	H0584: 9, H0167: 2, H0271: 1 and H0416: 1.
HT5EU59	739092	5723	1 - 354	15475	Arg-3 to Ala-10, Pro-21 to Thr-36, Gly-38 to Gly-51, Arg-58 to Gly-64.	H0584: 2
HT5FD31	697721	5724	3 - 335	15476	Ala-32 to Glu-38, Gln-74 to Gly-85.	H0584: 4
HTAAA68	733636	5725	131 - 244	15477	Gln-23 to Asn-29.	H0069: 2

HTAAA74	960479	5726	1 - 315	15478	Glu-12 to Thr-22, Arg-28 to Ala-33, Leu-45 to Thr-50.	H0069: 2 and L0592: 1.	
HTAAC05	932913	5727	90 - 329	15479	Gly-1 to His-6.	H0069: 5	
HTAAG63	578537	5728	24 - 182	15480		H0402: 2, L0529: 2 and H0069: 1.	22
HTAAP36	629270	5729	25 - 135	15481	Glu-13 to Glu-20.	H0069: 2	
HTAAP96	518454	5730	24 - 152	15482	Cys-16 to Arg-25, Arg-33 to Leu-41.	H0069: 3 and H0635: 1.	
HTAAQ82	952304	5731	236 - 415	15483		H0069: 3 and H0556: 1.	
HTAAU76	508527	5732	2 - 274	15484	Arg-10 to Arg-17.	H0069: 3	
HTAAU78	870884	5733	76 - 129	15485		H0069: 3	
HTAAW11	961231	5734	57 - 248	15486		H0069: 5	
HTAAW46	719422	5735	3 - 122	15487	Met-1 to Thr-6, Pro-21 to Ser-27.	H0069: 2	
HTAAW81	535295	5736	2 - 166	15488	Gln-11 to Ser-16.	H0069: 5	
HTAAY89	575304	5737	39 - 146	15489		H0069: 3	
HTABE51	960936	5738	103 - 288	15490	Glu-2 to Lys-26.	H0069: 2	
HTABE93	509675	5739	95 - 259	15491		H0069: 3	
HTABF52	535399	5740	113 - 316	15492	Lys-22 to Pro-28.	H0069: 4	
HTABF72	508952	5741	126 - 329	15493	Arg-13 to Arg-18.	H0069: 2	
HTABG03	960931	5742	2 - 220	15494	Arg-1 to Gln-7.	H0069: 9	
HTABG44	508366	5743	142 - 14	15495	Ala-1 to Arg-9.	H0069: 2	
HTABG83	518355	5744	124 - 177	15496		H0069: 2 and H0318: 1.	
HTABG87	940153	5745	75 - 344	15497	Ser-9 to Ser-14, Lys-24 to Ser-30, Cys-34 to Ile-39, Lys-46 to Leu-60.	H0069: 1 and H0581: 1.	
HTABJ93	508441	5746	3 - 263	15498		H0069: 3	
HTABK73	835945	5747	3 - 251	15499	Pro-60 to Lys-68.	H0069: 1, S0144: 1 and S0142: 1.	
HTABN17	954400	5748	3 - 89	15500	Gln-16 to Ile-21.	H0069: 8	
HTACL04	925571	5749	96 - 263	15501	Pro-7 to Thr-27.	H0069: 1 and H0635: 1.	
HTACN31	974314	5750	280 - 408	15502		H0069: 1 and H0635: 1.	
HTACN96	975073	5751	394 - 582	15503		H0069: 3 and H0635: 2.	

HTACP19	537439	5752	3 - 101	Thr-1 to Met-32.	15504	H0069: 2 and H0543: 1.	12q24.3-qter
HTACP52	968997	5753	200 - 433	Glu-67 to Arg-72.	15505	L0766: 2, H0069: 1 and H0625: 1.	
HTACR92	918250	5754	2 - 271	Gly-10 to Gly-15, Tyr-22 to Lys-31, Glu-70 to Phe-76.	15506	H0069: 1 and H0635: 1.	
HTACS45	537433	5755	57 - 122	Pro-15 to Gly-22.	15507	H0069: 2	
HTACS46	537435	5756	2 - 181		15508	H0069: 2	
HTACT29	537377	5757	119 - 271		15509	S0052: 2 and H0069: 1.	
HTACU21	504612	5758	63 - 143		15510	H0069: 2	
HTACU80	777608	5759	31 - 207		15511	H0069: 1 and S0428: 1.	
	870869	9596	161 - 316	Cys-32 to Asn-38.	19348		
HTACW17	961560	5760	3 - 287	Arg-22 to Thr-28, Pro-41 to Gln-48.	15512	H0069: 1 and H0063: 1.	
HTACY32	531492	5761	290 - 445	Cys-14 to Glu-30.	15513	H0069: 1 and H0264: 1.	
HTACY49	557836	5762	62 - 199	Leu-23 to Ser-29.	15514	H0069: 2	
HTADA22	507146	5763	1 - 297		15515	H0069: 2	
HTADC11	967577	5764	3 - 170	Gln-1 to Pro-6, Ser-15 to Glu-30, Ile-37 to Tyr-42.	15516	H0069: 1, H0635: 1 and L0780: 1.	
HTADH05	932470	5765	44 - 130	Arg-1 to Glu-7.	15517	H0069: 2	
HTADH61	955245	5766	52 - 189		15518	H0069: 2	
HTADI11	964944	5767	2 - 238	Pro-7 to Lys-12, Pro-27 to Gly-39.	15519	H0069: 2	
HTADI93	870820	5768	2 - 172	Ser-45 to Ser-54.	15520	H0069: 1 and H0635: 1.	
HTADJ25	537427	5769	58 - 264	Thr-56 to Thr-63.	15521	H0069: 2	
HTADJ36	773764	5770	29 - 391	Ser-9 to Ala-16, Lys-19 to Gln-31, Pro-63 to Trp-68, Pro-90 to Gly-98.	15522	H0069: 2	
HTADK40	537423	5771	306 - 461		15523	H0069: 2	
HTADM61	550342	5772	190 - 432	Phe-8 to Cys-15.	15524	H0069: 2 and H0556: 1.	
HTADQ83	734996	5773	56 - 241	Ser-40 to Phe-45, Pro-51 to Arg-58.	15525	H0069: 1 and S0142: 1.	
HTADQ93	537418	5774	1 - 69		15526	H0069: 2	

HTADR41	934435	5775	73 - 225	15527		H0069: 2
HTADW69	537428	5776	3 - 101	15528		H0069: 2
HTAED78	761591	5777	188 - 319	15529		H0069: 2
HTAEF32	927101	5778	217 - 372	15530	Glu-1 to Ile-6.	H0069: 2
HTAEH74	974303	5779	234 - 377	15531		H0635: 2 and H0069: 1.
HTAEJ77	930978	5780	3 - 428	15532	His-1 to Arg-20.	H0069: 2 and H0635: 1.
HTAEK78	773763	5781	303 - 494	15533	Glu-1 to Pro-7.	H0069: 2
HTAEL90	958220	5782	1 - 147	15534		H0069: 1, H0457: 1 and S0426: 1.
HTAEO84	537374	5783	3 - 104	15535		H0069: 2
HTAER18	537421	5784	71 - 205	15536		H0069: 2
HTAES82	537373	5785	126 - 254	15537	Asp-10 to Asp-16, Gln-29 to Ala-35.	H0069: 3
HTAET86	969532	5786	2 - 298	15538		H0069: 1 and H0635: 1.
HTAEU76	767963	5787	311 - 568	15539	Ser-1 to Glu-10, Ser-53 to Phe-59.	H0069: 1 and H0264: 1.
HTAEV65	838803	5788	169 - 402	15540		H0069: 1, H0635: 1 and L0523: 1.
HTAEW87	971526	5789	243 - 329	15541	Ile-1 to Gln-7.	H0069: 4
HTAEW95	780986	5790	28 - 462	15542		H0584: 2, H0265: 1 and H0069: 1.
HTAEX66	881092	5791	209 - 487	15543	Arg-65 to Asp-70.	H0069: 5
HTAFA06	934570	5792	107 - 322	15544	Ala-29 to Tyr-45, Gly-53 to Ala-60.	H0069: 2
HTAFA66	868433	5793	167 - 454	15545	Pro-38 to Trp-51, Asp-53 to Gly-59, Thr-70 to Trp-78.	H0069: 1 and H0581: 1.
HTAFC37	973085	5794	359 - 93	15546	Gln-1 to Gly-7, Pro-16 to Asp-28, Arg-66 to Asp-73.	H0069: 2, L0794: 1, L0803: 1 and L0758: 1.
HTAFC76	767976	5795	46 - 303	15547	Asp-68 to Gly-80.	H0069: 2
HTAFD63	744409	5796	68 - 21	15548		H0069: 2
HTAFE69	944409	5797	25 - 366	15549	Lys-14 to Glu-32.	AR061: 7, AR089: 5 H0069: 3, L0794: 1, L0803: 1 and L0758: 1.

HTAFE90	787604	134 - 232	15550		H0069: 1 and H0090: 1.
HTAFF11	933028	99 - 338	15551	Trp-36 to Tyr-58, Ser-74 to Asp-80.	H0069: 2
HTAFF76	767968	226 - 393	15552		H0069: 2
HTAFG52	974338	23 - 283	15553		H0069: 1, H0635: 1 and S0216: 1.
HTAFG58	870854	3 - 239	15554	Gln-2 to Leu-10.	H0069: 1 and H0635: 1.
HTAGA71	870853	137 - 304	15555		H0069: 1 and H0635: 1.
HTAGB89	974060	258 - 371	15556		H0635: 2 and H0069: 1.
HTAGC91	963125	164 - 397	15557	Gln-17 to Gly-23.	H0635: 4
HTAGI29	925699	155 - 334	15558		H0556: 1, H0635: 1 and S0474: 1.
HTAGI53	936117	1 - 198	15559	Gly-7 to Gly-16.	H0271: 2, H0255: 1 and H0635: 1.
HTAGL61	963182	1 - 363	15560	Ala-1 to Gln-11, Lys-30 to Lys-40, Arg-52 to His-73, Asp-109 to Leu-114.	H0635: 3
HTAGN04	926501	294 - 473	15561	Lys-46 to Arg-52.	H0635: 2 and L0748: 1.
HTAGV46	847777	2 - 238	15562	Asp-54 to Ser-63, Ser-65 to Gln-79.	H0635: 2 and S0116: 1.
HTAGV49	836078	130 - 435	15563	Lys-13 to Leu-20, Ser-39 to Arg-46.	H0635: 2 and L0766: 1.
HTAGZ11	965867	104 - 280	15564	Cys-37 to His-45.	S0114: 1 and H0635: 1.
HTAHB17	860919	2 - 292	15565	Pro-7 to Gly-15, Pro-37 to Gly-42.	H0635: 1 and H0271: 1.
HTAHI49	934013	243 - 494	15566	Asn-52 to Gln-59.	H0635: 2 and H0069: 1.
HTAHK12	920332	249 - 458	15567		H0635: 1 and H0422: 1.
HTAHL28	974030	3 - 359	15568	Val-2 to Pro-7, Ala-17 to Gly-24, Arg-26 to Leu-32, Cys-36 to Arg-49, Arg-56 to Gly-67, Asn-69 to Trp-76, Gly-79 to Pro-89, Tyr-108 to Ile-113.	H0635: 3

HTAHL45	908949	139 - 663	15569	Leu-14 to Lys-20, Glu-28 to Ala-67, Pro-81 to Gln-88, Leu-128 to Lys-137.	AR061: 314, AR089: 160 H0635: 2 and L0439: 2.
HTAHL76	974300	2 - 202	15570		H0635: 2 and H0556: 1.
HTAHN29	923115	317 - 580	15571	Gly-1 to Cys-17, His-59 to Pro-69, Arg-82 to Ile-88.	H0556: 1, H0635: 1 and H0543: 1.
HTAHQ22	870831	5 - 289	15572	Leu-8 to Ser-16, Ser-25 to Glu-32, Gly-71 to Lys-79.	H0635: 2
HTAHQ94	839505	248 - 520	15573		H0635: 2
HTAHR03	922772	267 - 380	15574		H0069: 1 and H0635: 1.
HTAHR06	934062	203 - 358	15575	Ser-7 to Gln-18, Pro-44 to Asp-51.	H0457: 2, H0635: 1 and H0445: 1.
HTAHS10	963183	9 - 218	15576	Asn-6 to His-12.	H0635: 3
HTAHS21	960795	3 - 380	15577	Cys-12 to Pro-17, Arg-45 to Cys-54, Glu-58 to Ile-67, Val-100 to Gln-105.	H0069: 1 and H0635: 1.
HTAHV04	926747	3 - 449	15578		H0635: 2, L0746: 2, L0770: 1, L0769: 1, L0659: 1 and L0745: 1.
HTAIB11	965835	2 - 118	15579		H0635: 2
HTAIC05	930951	622 - 819	15580	Asn-10 to Ser-16.	L0749: 5, H0635: 1, S0426: 1 and L0748: 1.
HTAID04	926541	200 - 403	15581	Glu-32 to Ser-38.	H0069: 2 and H0635: 1.
HTAIF70	974062	2 - 214	15582		H0069: 2, H0635: 1 and H0179: 1.
HTAIF78	870785	22 - 363	15583	Leu-1 to Gly-8, Ser-74 to Gly-84, Pro-97 to Gly-108.	H0556: 3, H0069: 1, H0635: 1, H0318: 1, S0344: 1 and L0766: 1.
HTAIK75	870815	282 - 470	15584	Pro-8 to Val-15.	H0635: 1 and H0542: 1.
HTAIQ39	921729	19 - 249	15585		H0069: 1 and H0635: 1.
HTAIQ75	870804	3 - 281	15586	Arg-9 to Gly-15, Ser-57 to Gln-68.	H0635: 2

HTAIR54	870814	5835	106 - 327	15587	Thr-33 to Phe-38.	L0600: 2, H0635: 1 and H0264: 1.	9q11-q22	229600, 264300, 600542, 602014, 602088
HTAIU80	968234	5836	23 - 205	15588	Ser-30 to Asp-36.	H0635: 1 and H0271: 1.		
HTAIV79	870874	5837	63 - 368	15589	Pro-4 to Leu-14, Ser-43 to Pro-49.	H0069: 1 and H0635: 1.		
HTAJG31	926731	5838	282 - 452	15590	His-18 to Cys-24.	H0635: 2		
HTAJG65	975260	5839	152 - 355	15591	His-59 to Leu-66.	H0635: 3 and H0069: 1.		
HTAJI01	914899	5840	160 - 2	15592		H0635: 2		
HTAJN08	958057	5841	2 - 160	15593		H0635: 2		
HTAJR80	975309	5842	183 - 380	15594		H0635: 3		
HTBAA95	715044	5843	2 - 478	15595	His-1 to Glu-14, Thr-22 to Ser-28, Pro-36 to Val-44, Gln-80 to Asp-91.	H0075: 1 and H0521: 1.		
HTDAA07	870742	5844	3 - 209	15596	Asp-1 to Gly-9.	H0486: 1 and H0477: 1.		
HTDAC37	575842	5845	3 - 227	15597	Ser-62 to Glu-75.	H0477: 2 and L0041: 1.		
HTDAC77	772242	5846	51 - 233	15598		H0556: 1 and H0477: 1.		
HTDAE25	714359	5847	506 - 694	15599	Leu-19 to His-29.	H0635: 1 and H0477: 1.		
HTDAE43	889311	5848	2 - 169	15600		H0457: 1 and H0477: 1.		
	971582	9597	390 - 638	19349	Pro-27 to Gly-34.	H0581: 2, H0477: 1, H0272: 1 and L0766: 1.		
HTDAF65	927842	5849	415 - 672	15601	Gly-4 to Tyr-10.	H0069: 2, H0635: 1 and H0477: 1.		
HTDAG18	975317	5850	236 - 520	15602	Val-7 to Gly-19, Thr-51 to Thr-56, Ser-62 to Gly-72.	H0477: 1.		
HTDAI42	576013	5851	46 - 180	15603	Asn-35 to Ser-40.	H0477: 1 and H0422: 1.		
HTGAL23	574100	5852	96 - 308	15604	Ile-12 to Thr-17.	S0134: 2 and L0594: 1.		
HTGAM06	935798	5853	2 - 298	15605	Ile-1 to Phe-13, Leu-16 to Arg-33, Ser-45 to Ser-50.	S0134: 2		
HTGAM26	682040	5854	2 - 175	15606		S0134: 1 and H0341: 1.		
HTGAM42	578797	5855	31 - 126	15607		S0134: 2		
HTGAN20	578804	5856	1 - 327	15608	Gly-1 to Pro-13, Lys-20 to Val-33, Pro-74 to Glu-84.	S0134: 2		

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HTGAO17	876650	5857	3 - 569	15609	Arg-41 to Asn-46, Pro-96 to Lys-102, Ala-122 to Glu-127.	S0134: 1, T0042: 1 and H0543: 1.		
HTGAR40	664270	5858	67 - 216	15610	Glu-17 to Ile-29.	S0134: 2		
HTGAR72	574681	5859	1 - 291	15611	Gly-1 to Cys-8, Glu-11 to Gly-19.	S0134: 1 and H0271: 1.		
HTGAS32	835534	5860	258 - 458	15612	Gly-15 to Glu-20, Gly-24 to Cys-30.	S0134: 1, L0623: 1, H0087: 1, H0445: 1 and L0599: 1.		
HTGAT93	791508	5861	1 - 153	15613		S0134: 1 and H0436: 1.		
HTGAV59	870798	5862	241 - 420	15614	Pro-11 to Thr-19.	S0134: 3		
HTGAW37	752829	5863	2 - 172	15615		S0134: 1 and H0318: 1.		
HTGAW75	572404	5864	201 - 422	15616	Thr-1 to Ser-8, Gly-13 to Lys-19.	S0134: 1 and H0179: 1.		
HTGAX19	782877	5865	46 - 294	15617	Ser-35 to Thr-42.	S0134: 1, H0581: 1 and H0576: 1.		
HTGAY36	923716	5866	122 - 319	15618		S0134: 1 and H0576: 1.		
HTGAY79	775299	5867	2 - 208	15619		S0134: 1 and H0522: 1.		
HTGAZ62	870414	5868	345 - 157	15620		S0134: 2		
HTGAZ79	584717	5869	13 - 183	15621		S0134: 1, T0041: 1 and L0748: 1.		
HTGBE53	685648	5870	24 - 332	15622	Ala-22 to Phe-28.	S0114: 1 and S0134: 1.		
HTGBE76	954599	5871	287 - 613	15623	Val-95 to Arg-101.	H0341: 2, S0134: 1, L0759: 1 and H0543: 1.		
HTGBF16	572499	5872	184 - 420	15624	Ser-33 to Leu-45.	L0748: 3, S0134: 1 and H0271: 1.		
HTGBF62	753962	5873	53 - 298	15625		S0134: 1 and S0002: 1.		
HTGBF90	786611	5874	2 - 217	15626		S0134: 1, H0581: 1 and H0543: 1.		
HTGBG55	966903	5875	3 - 164	15627	Pro-18 to Ala-33.	S0134: 1, L0779: 1 and H0543: 1.		
HTGBH18	579103	5876	102 - 260	15628	Glu-9 to Cys-15, His-45 to Arg-53.	S0134: 1 and S0116: 1.		
HTGBH55	735751	5877	83 - 595	15629		S0278: 2 and S0134: 1.		
HTGBI93	787110	5878	3 - 221	15630	Arg-37 to Leu-42.	S0134: 1 and H0305: 1.		
HTGBJ55	579005	5879	181 - 357	15631		S0134: 1 and H0354: 1.	Xq28	300031, 300044, 300048, 300049,

HTGBK66	772325	5880	78 - 341	15632	Pro-8 to Trp-15.	S0134: 2	300049, 300100, 300100, 300104, 300126, 301201, 301590, 302060, 302060, 302060, 302960, 303700, 303800, 303900, 304800, 305900, 305900, 305900, 306700, 306995, 308310, 308840, 308840, 309200, 309548, 309620, 309900, 310300, 310400, 310460, 310460, 311300, 311510, 314300, 314400
HTGBL34	572643	5881	66 - 281	15633	Ala-29 to Arg-41.	S0134: 1 and H0090: 1.	
HTGBL72	576641	5882	35 - 238	15634		S0134: 1 and H0423: 1.	
HTGBN09	506500	5883	3 - 215	15635	Asn-32 to His-39.	S0134: 2	
HTGBN27	683557	5884	222 - 145	15636		S0134: 2 and S0002: 1.	
HTGBN57	578806	5885	1 - 270	15637		S0134: 2	
HTGBP65	870406	5886	54 - 239	15638	Glu-28 to Ser-33.	S0134: 2	
HTGBR20	669797	5887	144 - 311	15639	Lys-32 to Gln-37.	S0134: 1 and S0344: 1.	
HTGBR93	973978	5888	3 - 272	15640		S0134: 3	
HTGBS02	920445	5889	91 - 234	15641		S0134: 2	
HTGBY51	506502	5890	22 - 228	15642	Gln-54 to Glu-60.	S0134: 2	
HTGCD10	964884	5891	82 - 288	15643	Leu-27 to Ser-33, Gln-46 to Ala-53.	S0134: 1 and S0218: 1.	
HTGCD85	579028	5892	121 - 327	15644		S0134: 2	
HTGCF49	723090	5893	122 - 559	15645	His-1 to Gly-19, Ala-26 to Gly-31, Pro-48 to Ser-57,	S0134: 1 and H0444: 1.	

Clone ID	cDNA Clone	Range	SEQ ID NO:	Feature	References
HTGCG89	894005	3 - 155	15646	Ala-83 to Asn-117.	S0134: 1 and H0576: 1.
HTGCH58	909849	408 - 1103	15647	Asn-1 to Val-6. Arg-25 to Glu-32, Ser-73 to Lys-85, Asp-138 to Gln-145, Glu-164 to Asp-174, Leu-185 to Lys-194.	AR089: 2, AR061: 1 L0766: 2, L0776: 2, L0740: 2, S0134: 1, H0635: 1, L0370: 1, S0142: 1, L0792: 1, H0521: 1, H0522: 1, L0779: 1 and L0366: 1.
HTGCI80	588166	79 - 243	15648		S0134: 1, L0471: 1, L0753: 1 and H0543: 1.
HTGCJ54	571389	88 - 276	15649	Thr-1 to Thr-6.	S0134: 2 and S0114: 1.
HTGCL06	935789	204 - 338	15650		S0134: 1 and H0580: 1.
HTGCL40	578774	100 - 219	15651		S0134: 2
HTGCL94	747573	1 - 183	15652		AR054: 10, AR050: 7, AR051: 3 S0134: 2
HTGCM13	913673	1 - 132	15653		S0134: 2
HTGCM90	678122	80 - 358	15654	Gln-71 to Val-77.	S0114: 1 and S0134: 1.
HTGCM92	578768	1 - 138	15655	Ser-13 to Arg-23.	S0134: 2
HTGCP76	770143	10 - 144	15656	Gln-1 to Trp-25.	S0134: 1 and H0421: 1.
HTGCQ15	880293	128 - 391	15657		S0134: 1, S0218: 1, S0002: 1 and L0748: 1.
HTGCQ19	974433	70 - 279	15658	Pro-41 to Cys-46.	S0134: 2 and H0543: 1.
HTGCS20	933260	2 - 205	15659		S0134: 1 and H0486: 1.
HTGCS81	921650	15 - 167	15660		S0134: 2
HTGCT54	960912	55 - 204	15661	Asn-15 to Trp-34.	S0134: 1 and H0543: 1.
HTGCT57	496297	49 - 213	15662		S0134: 1 and S0002: 1.
HTGCU25	679403	124 - 279	15663	Arg-1 to Phe-7.	S0134: 1 and S0002: 1.
HTGCU28	713353	43 - 165	15664	Gly-1 to Lys-15.	S0134: 1 and S0218: 1.
HTGDG28	735002	99 - 266	15665	Asn-20 to Gly-28.	S0134: 2 and S0114: 1.
HTGDG63	579127	113 - 298	15666	Phe-11 to Glu-25, Lys-33 to Arg-51.	S0134: 2 and S0114: 1.
HTGDG70	757191	75 - 230	15667	Gly-2 to Gln-7.	S0134: 2
HTGDG75	769010	9 - 116	15668		S0134: 1 and H0444: 1.
HTGDM56	733405	240 - 365	15669	Gly-12 to Val-29.	S0134: 1 and S0218: 1.

HTGDM65	967158	5918	2 - 355	Gln-20 to Ala-26, Thr-58 to Lys-65, Gly-83 to Glu-89.	S0114: 2, S0134: 1 and H0255: 1.
HTGDS63	958651	5919	161 - 373	Pro-10 to Arg-15.	S0134: 1 and S0218: 1.
HTGDS88	659766	5920	71 - 208	Ile-20 to Thr-25.	S0134: 1 and S0218: 1.
HTGDT91	974962	5921	306 - 638	Pro-12 to Asn-20, Asp-43 to Arg-49.	AR089: 0, AR061: 0 S0134: 1 and H0069: 1.
HTGDU57	712249	5922	270 - 536	Gln-25 to Val-30.	H0543: 2 and S0134: 1.
HTGDV50	708605	5923	336 - 464		S0134: 1 and H0090: 1.
HTGDW16	661477	5924	322 - 516	Arg-1 to Lys-7.	S0134: 2 and L0599: 1.
HTGDW40	710759	5925	50 - 220		S0134: 3, H0556: 1 and S0216: 1.
HTGDW96	967030	5926	208 - 1356	Arg-157 to Asn-172, Val-179 to Leu-185, Arg-206 to Ile-215, Ser-232 to Thr-241, Glu-374 to Pro-379.	AR089: 10, AR061: 8 S0134: 1, S0278: 1, S0144: 1, S0344: 1 and H0423: 1.
HTGDX29	883517	5927	169 - 462	His-20 to Cys-27, Ala-40 to Ile-54.	S0134: 1 and S0426: 1.
HTGEB95	725254	5928	137 - 397	Glu-8 to Gln-13, Glu-43 to Ser-53.	L0776: 6, H0591: 2, S0218: 1, L0805: 1, H0521: 1 and H0543: 1.
HTGED32	698776	5929	612 - 773	Leu-13 to Pro-29.	S0218: 1 and H0306: 1.
HTGED54	729223	5930	1 - 462		S0114: 1 and S0218: 1.
HTGED59	711417	5931	3 - 182		S0218: 1 and H0306: 1.
HTGED69	754761	5932	35 - 169		S0134: 1 and S0218: 1.
HTGEF77	771825	5933	337 - 498	Leu-13 to Phe-20, Leu-28 to Gly-46.	H0556: 1 and S0218: 1.
HTGEF78	769764	5934	1 - 147		S0218: 2
HTGEG76	769765	5935	3 - 212		S0218: 1 and H0521: 1.
HTGEL46	685425	5936	323 - 457		AR089: 0, AR061: 0 S0218: 1, H0264: 1 and S0053: 1.
HTGEL54	728905	5937	166 - 384	Thr-41 to Asp-58.	S0218: 2
HTGEL55	684871	5938	45 - 302	His-25 to Ala-37.	S0114: 1 and S0218: 1.
HTGEO46	674409	5939	268 - 417	Pro-9 to Asp-21.	S0218: 1 and H0436: 1.

HTGEO86	703733	5940	57 - 272	15692	Arg-1 to Ser-11, Asp-21 to Leu-29.	S0218: 2
HTGEO94	723097	5941	422 - 622	15693		S0218: 1 and H0063: 1.
HTGEP20	799683	5942	13 - 276	15694	Ser-3 to Ser-10, Pro-37 to Thr-44, Phe-67 to Gln-74.	H0264: 2 and S0218: 1.
HTGEP92	789681	5943	44 - 352	15695		S0218: 1 and S0428: 1.
HTGEQ11	967047	5944	3 - 311	15696	Arg-1 to Gly-8, Pro-26 to Gly-34.	AR089: 1, AR061: 1 S0218: 2
HTGEQ34	703443	5945	27 - 161	15697	Lys-16 to Asn-23.	S0218: 2
HTGEQ40	711181	5946	1 - 69	15698		S0218: 2
HTGEQ61	741828	5947	39 - 218	15699	Lys-28 to Asn-35.	S0218: 1, H0444: 1 and H0422: 1.
HTGEQ68	753031	5948	178 - 330	15700	Val-23 to Pro-31.	S0218: 2
HTGER72	683469	5949	96 - 215	15701		S0218: 1 and S0053: 1.
HTGET46	719048	5950	1 - 270	15702	Gly-1 to Cys-6, Leu-18 to Lys-26, Glu-33 to Arg-43, Ile-63 to Ile-82.	S0218: 2 and H0580: 1.
HTGET82	778928	5951	158 - 310	15703		S0218: 1 and H0521: 1.
HTGEU06	935470	5952	3 - 128	15704		S0114: 1 and S0218: 1.
HTGFC20	668924	5953	2 - 232	15705	Gln-8 to Asn-17, Asp-24 to Gln-30, Arg-41 to Cys-48, Ala-71 to Phe-77.	S0218: 1 and H0255: 1.
HTGFC70	757193	5954	206 - 364	15706		S0218: 2
HTGFK43	669222	5955	3 - 323	15707	Asp-5 to Thr-13.	S0218: 2 and L0758: 1.
HTGFN46	974106	5956	313 - 501	15708	Leu-1 to Cys-7.	S0218: 4
HTGFO51	866957	5957	2 - 166	15709	Ser-1 to Cys-8.	S0218: 2 and S0114: 1.
HTGFO75	767032	5958	53 - 280	15710	His-1 to Lys-6, Val-45 to Tyr-54.	H0265: 1 and S0218: 1.
HTGFP07	952555	5959	147 - 341	15711	Val-9 to Val-15, Trp-44 to Arg-54.	S0218: 2, L0369: 1 and L0376: 1.
HTGFP49	722626	5960	90 - 239	15712	Met-27 to Ser-33.	S0218: 2
HTGFP59	738974	5961	31 - 135	15713	Tyr-10 to Gly-17.	S0218: 2
HTGFP62	742908	5962	32 - 223	15714		S0218: 2

HTGFR80	810302	5963	27 - 257	15715	Leu-70 to Ser-76.	S0134: 1 and S0218: 1.
HTGFW29	690276	5964	1 - 249	15716	Gly-20 to Pro-27.	S0218: 1 and H0264: 1.
HTGFW63	744678	5965	167 - 556	15717		L0747: 2, S0218: 1 and H0423: 1.
HTGFX16	656777	5966	3 - 329	15718	Pro-33 to Ala-46, Asn-54 to Val-69, Pro-73 to Ser-78, Glu-93 to Pro-101.	S0218: 1 and H0581: 1.
HTGFX82	779055	5967	75 - 278	15719	Asn-34 to Lys-40.	S0218: 2
HTGFZ03	923443	5968	3 - 275	15720		AR089: 1, AR061: 1 S0218: 1 and H0485: 1.
HTGFZ35	707730	5969	13 - 285	15721	Ser-60 to Leu-66.	S0218: 2
HTGFZ58	735683	5970	59 - 190	15722		H0265: 1 and S0218: 1.
HTGGL08	958583	5971	2 - 232	15723		S0218: 2
HTGGL11	966328	5972	3 - 158	15724		S0218: 2
HTGGL23	974590	5973	3 - 449	15725		S0218: 2
HTGGL32	698714	5974	114 - 266	15726	Asp-1 to Ser-7, Lys-23 to Ile-28.	S0218: 2
HTGGL43	714932	5975	36 - 218	15727	Leu-11 to Gln-16.	S0218: 2
HTGGL79	774657	5976	2 - 103	15728	Thr-1 to Asn-10.	S0218: 2
HTGGM20	669083	5977	7 - 129	15729	Arg-20 to Gly-26.	S0218: 1, S0212: 1, H0318: 1 and L0648: 1.
HTGGN13	869239	5978	2 - 235	15730	Pro-10 to Ala-16.	S0218: 2 and H0556: 1.
HTGGN92	927051	5979	3 - 197	15731		H0556: 1 and S0218: 1.
HTHAA47	503638	5980	59 - 313	15732		H0222: 1 and H0062: 1.
HTHBA07	954426	5981	27 - 203	15733		H0063: 2 and L0657: 1.
	954427	9598	265 - 62	19350		
HTHBA18	502818	5982	3 - 128	15734		H0063: 2
HTHBA68	915256	5983	3 - 392	15735		H0556: 1 and H0063: 1.
HTHBC31	578568	5984	259 - 468	15736		H0063: 1 and H0423: 1.
HTHBC37	502935	5985	101 - 256	15737	Tyr-10 to Thr-16.	H0063: 2
HTHBG67	964562	5986	172 - 318	15738	Thr-6 to Leu-11.	H0220: 1, H0486: 1, H0063: 1 and H0625: 1.
HTHBK65	526716	5987	1 - 132	15739		H0063: 2
HTHBL65	921965	5988	1 - 366	15740	Glu-6 to Thr-17,	H0402: 1 and H0063: 1.

HTHBOO09	531115	5989	3 - 140	15741	Trp-23 to Arg-38.	S0114: 1 and H0063: 1.	
HTHBQ94	529671	5990	85 - 243	15742	Lys-11 to Glu-19.	H0063: 1 and H0264: 1.	
HTHBU75	557957	5991	2 - 133	15743	Pro-23 to Glu-35.	H0265: 1 and H0063: 1.	
HTHBW69	757741	5992	85 - 246	15744		H0318: 1 and H0063: 1.	
HTHBY64	712474	5993	320 - 493	15745	Ser-25 to Trp-30.	H0063: 2 and S0052: 2.	
HTHCA17	572407	5994	107 - 298	15746	Lys-19 to Leu-24.	H0063: 1 and H0264: 1.	
HTHCA75	712649	5995	208 - 477	15747		H0063: 1, H0272: 1 and L0749: 1.	
HTHCB68	660309	5996	3 - 359	15748	His-1 to Ser-7, Thr-33 to Gly-40.	H0063: 2	2q37.2
HTHCB83	578858	5997	109 - 321	15749	Cys-24 to Asn-33, Ala-53 to Ser-61.	H0063: 2	
HTHCC54	578877	5998	131 - 340	15750	His-8 to Asp-13, Arg-21 to Cys-29.	H0063: 2	
HTHCD17	664274	5999	62 - 331	15751	Asp-1 to Glu-6.	H0063: 2	
HTHCD91	973272	6000	407 - 535	15752		H0063: 3	
HTHCG11	967275	6001	117 - 245	15753	Tyr-29 to Ile-37.	H0063: 1 and H0521: 1.	
HTHCG86	578843	6002	1 - 165	15754	Gly-1 to Lys-12, Arg-19 to Ser-27.	H0063: 1 and H0543: 1.	
HTHCH22	630239	6003	293 - 547	15755		H0305: 1, H0589: 1, H0063: 1 and L0591: 1.	
HTHCJ42	578875	6004	82 - 291	15756		H0063: 2	
HTHCK38	579080	6005	3 - 275	15757		H0063: 1 and H0264: 1.	
HTHCK42	870355	6006	239 - 376	15758		H0063: 2	
HTHCK91	922873	6007	1 - 141	15759		H0063: 1 and S0426: 1.	
HTHCM08	959719	6008	20 - 268	15760	Lys-19 to Asn-27.	H0063: 2	
HTHCM19	842036	6009	199 - 375	15761	Gly-24 to Arg-29.	H0305: 3, H0581: 1 and H0063: 1.	
HTHCM39	578831	6010	147 - 350	15762	Asn-28 to Phe-43.	H0063: 2	
HTHCN38	578826	6011	183 - 371	15763	Pro-1 to Ser-9.	H0063: 2	
HTHCO28	705888	6012	1 - 231	15764		S0114: 1 and H0063: 1.	
HTHCO92	578757	6013	1 - 84	15765		L0794: 3, L0766: 2, H0581: 1, H0063: 1, L0792: 1, L0438: 1, L0439: 1 and	

HTHCQ31	926330	6014	391 - 624	15766	Leu-48 to Arg-60.	L0779: 1. H0063: 1, L0766: 1, L0748: 1 and H0543: 1.		
HTHCQ63	959994	6015	224 - 361	15767		S0116: 2 and H0063: 1.		
HTHCR16	578722	6016	3 - 296	15768	His-1 to Pro-14, Arg-19 to Val-25, Cys-29 to His-42, Pro-62 to Arg-68, Cys-83 to Glu-92.	H0063: 2		
HTHCT64	856477	6017	44 - 286	15769	Glu-1 to Ala-11.	H0063: 1 and H0445: 1.		
HTHCU43	578849	6018	199 - 297	15770		H0063: 2		
HTHCU85	578851	6019	159 - 314	15771	Lys-35 to Gly-42.	H0063: 2		
HTHCV21	671098	6020	2 - 211	15772	Asn-45 to Ser-50.	S0134: 1, L0717: 1, H0063: 1 and L0749: 1.	1q21.2-q22	104770, 107670, 110700, 145001, 146760, 146790, 159440, 159440, 159440, 186780, 191030, 191315, 600923, 601412, 601652, 601863, 602491
HTHCV22	419714	6021	2 - 205	15773	Gly-48 to Lys-55.	H0063: 2		
HTHCV59	937393	6022	45 - 374	15774	Leu-71 to Gly-78.	AR089: 17, AR061: 10 H0318: 1 and H0063: 1.		
HTHCW35	707732	6023	55 - 147	15775	Ile-16 to His-22.	H0580: 1 and H0063: 1.		
HTHCW45	578823	6024	3 - 152	15776		H0063: 2		
HTHCW83	578828	6025	73 - 252	15777	Leu-1 to Lys-8, Thr-20 to Asn-26.	H0063: 2		
HTHCX84	578874	6026	29 - 280	15778		H0063: 2		
HTHCY12	971165	6027	222 - 515	15779	Pro-22 to Pro-32, Arg-40 to Lys-50, Ala-69 to Gly-74.	L0766: 3, H0063: 2, L0769: 1, L0779: 1 and L0759: 1.		
HTHCZ96	578876	6028	94 - 306	15780	Arg-1 to Thr-7, Phe-27 to Ala-47.	H0063: 2		
HTHDD40	707065	6029	2 - 367	15781	Arg-18 to Val-37.	H0063: 2		
HTHDE26	869483	6030	160 - 546	15782	Pro-52 to Leu-58.	H0063: 1, H0576: 1 and		

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HTHDE44	791641	6031	286 - 363	15783		H0445: 1.
HTHDE91	967215	6032	164 - 307	15784		H0063: 1 and S0428: 1.
HTHDF38	870339	6033	1 - 186	15785	Asn-10 to Leu-15, Phe-35 to Leu-42, Ser-56 to Arg-62.	H0063: 1 and H0423: 1. H0637: 1, H0063: 1, L0598: 1, H0542: 1 and H0423: 1.
HTHDH24	574675	6034	84 - 242	15786	Val-4 to His-15.	H0250: 1, H0271: 1 and H0063: 1.
HTHDH34	490926	6035	78 - 1	15787	Lys-1 to Thr-9, Leu-17 to Arg-26.	H0063: 5
	973304	9599	332 - 457	19351		
HTHDI31	959718	6036	173 - 304	15788		H0063: 2
HTHDI43	870335	6037	1 - 243	15789	Ser-40 to Asp-46, Val-48 to Lys-63.	H0063: 2
HTHDM25	578878	6038	145 - 333	15790		H0063: 2 and L0519: 1.
HTHDM65	579199	6039	145 - 252	15791		H0063: 2
HTHDM69	578834	6040	213 - 383	15792	Asn-3 to Gly-11.	H0063: 2
HTHDP70	578882	6041	134 - 268	15793		H0063: 2
HTHDQ85	966858	6042	33 - 227	15794	Lys-37 to Gly-43, Phe-57 to Thr-65.	H0063: 1 and H0272: 1.
HTHDR09	579076	6043	2 - 220	15795	Arg-1 to Gly-16, Ala-28 to Ala-34, Ser-40 to Lys-53.	H0063: 2
HTHDR24	578848	6044	2 - 208	15796	Ala-1 to Lys-13, Leu-19 to Ile-24, Tyr-26 to Ile-31, Pro-40 to Lys-46.	H0063: 2
HTHDU80	764136	6045	400 - 558	15797	Leu-19 to Arg-31.	H0580: 1 and H0063: 1.
HTJAB35	491273	6046	519 - 313	15798		AR089: 14, AR061: 3 H0063: 2, H0487: 1 and H0445: 1.
	853995	9600	358 - 185	19352		
	880424	9601	239 - 457	19353		
HTJAB39	705432	6047	111 - 260	15799		L0539: 1, H0580: 1 and H0487: 1.
HTJAD26	681865	6048	112 - 348	15800	Thr-59 to His-67.	H0487: 1 and S0002: 1.

HTJAE28	703321	6049	113 - 292	15801		H0487: 1 and H0423: 1.
HTJAE42	668339	6050	245 - 379	15802		H0583: 1, H0487: 1, L0805: 1 and L0740: 1.
HTJMB71	760226	6051	448 - 200	15803		H0265: 1, H0402: 1, H0488: 1 and H0522: 1.
	760247	9602	448 - 200	19354		
HTJMD95	924240	6052	222 - 368	15804	Glu-1 to Tyr-7.	H0488: 2
HTJMH80	774407	6053	115 - 393	15805		H0488: 3
HTJMQ69	754605	6054	104 - 310	15806		H0591: 2 and H0488: 1.
HTJMR65	729039	6055	1 - 120	15807	Gly-1 to Gly-9, Pro-16 to Leu-25.	H0488: 2
HTJMT23	948518	6056	2 - 241	15808		H0488: 2
HTJMT75	766883	6057	253 - 447	15809		H0488: 2 and L0749: 1.
HTJMU34	870316	6058	2 - 211	15810		H0488: 2
HTJMU77	771677	6059	2 - 283	15811	Glu-17 to Ser-26, Lys-61 to Lys-70, Phe-86 to Cys-93.	H0488: 1, L0762: 1, H0543: 1 and H0422: 1.
HTJMU87	870315	6060	1 - 300	15812	Glu-23 to Tyr-28.	H0069: 1 and H0488: 1.
HTJMV80	775766	6061	29 - 220	15813	Thr-17 to Ser-24, Glu-28 to Lys-38, Ser-43 to Val-49, Ser-56 to Lys-64.	H0488: 2 and L0605: 1.
HTJMW42	713132	6062	276 - 461	15814		H0271: 1 and H0488: 1.
HTJMX71	759910	6063	67 - 255	15815	Tyr-54 to Gln-59.	S0212: 1 and H0488: 1.
HTJMZ90	787655	6064	7 - 102	15816		H0488: 2
HTJNB83	766881	6065	1 - 138	15817		H0488: 2
HTJNC42	713142	6066	61 - 222	15818		S0212: 1 and H0488: 1. 8
HTJNC53	793328	6067	78 - 332	15819		H0488: 2
HTJND12	870311	6068	196 - 417	15820		H0488: 2
HTJNI42	924726	6069	2 - 373	15821	Thr-1 to His-6, Phe-8 to Pro-24, Leu-69 to Ser-75.	H0488: 1 and S0002: 1.
HTJNK36	924939	6070	172 - 441	15822	Arg-19 to Gly-28.	H0271: 2, H0488: 1, L0438: 1 and L0439: 1.
HTJNM52	795110	6071	7 - 306	15823	Pro-24 to Ala-29.	T0002: 1, H0488: 1 and

						L0602: 1.
HTJNQ25	771941	6072	2 - 205	15824	Arg-14 to His-23.	H0318: 1 and H0488: 1.
HTJNR19	781702	6073	3 - 161	15825		H0265: 1 and H0488: 1.
HTJNS23	870336	6074	2 - 535	15826	Ser-8 to Lys-15, Pro-30 to Asp-36.	H0063: 1 and H0488: 1.
HTJNV55	931039	6075	2 - 244	15827		H0581: 1 and H0488: 1.
HTOAA48	870027	6076	2 - 265	15828		H0264: 2
HTOAF15	866201	6077	2 - 610	15829	Tyr-51 to Glu-57, Ser-164 to Pro-171, Pro-185 to Lys-198.	AR051: 50, AR050: 37, AR054: 35 H0179: 2, L0519: 2, H0265: 1, H0264: 1, L0541: 1, S0053: 1 and S0216: 1.
HTOAI35	799686	6078	53 - 121	15830		H0264: 3
HTOAI69	529555	6079	2 - 97	15831	Gln-3 to Asn-8, Glu-22 to Arg-27.	H0264: 2
HTOAI93	751902	6080	47 - 235	15832		H0264: 2
HTOAK34	966800	6081	918 - 1196	15833	Ser-67 to Trp-77.	AR089: 1, AR061: 1 L0766: 2, H0264: 1 and H0521: 1.
HTOAK36	921745	6082	1 - 204	15834	Tyr-31 to Arg-40.	H0264: 2
HTOAO19	954183	6083	81 - 164	15835		H0264: 2
HTOAO75	530192	6084	23 - 214	15836	Asn-6 to Phe-16.	H0264: 2
HTOAT80	530186	6085	3 - 284	15837		H0264: 2
HTOAU62	738214	6086	3 - 398	15838		H0416: 1 and H0264: 1.
HTOAU94	620370	6087	10 - 195	15839		H0264: 1, S0002: 1 and H0521: 1.
HTOAW19	530114	6088	85 - 180	15840	Leu-14 to Glu-24.	H0264: 2
HTOAW26	530116	6089	2 - 61	15841		H0264: 2
HTOAW37	507322	6090	177 - 392	15842		H0264: 2 and L0439: 1.
HTOBA06	960618	6091	3 - 395	15843	Gly-1 to Tyr-9, His-37 to Pro-42, Lys-125 to Pro-131.	H0581: 1, H0272: 1 and S0428: 1.
HTOBA10	839919	6092	1 - 168	15844	His-40 to Arg-52.	H0272: 1 and H0445: 1.
HTOBE15	715538	6093	12 - 176	15845	Ser-6 to His-12, Lys-31 to Ser-36.	H0264: 1 and H0272: 1.

HTOBF03	925407	6094	57 - 146	15846		H0272: 2
HTOBF07	954184	6095	10 - 141	15847	Pro-14 to Gly-35.	H0272: 2
HTOBF35	530325	6096	6 - 314	15848	Lys-10 to Gly-16.	H0272: 2
HTOBG27	682263	6097	2 - 250	15849	Arg-16 to Thr-22.	H0272: 1, S0002: 1 and L0748: 1.
HTOBG70	740977	6098	27 - 146	15850	Ser-3 to Pro-9.	H0272: 1 and H0488: 1.
HTOBO11	966734	6099	32 - 169	15851		H0063: 1 and H0272: 1.
	966776	9603	356 - 192	19355		
HTOCF92	530009	6100	199 - 411	15852	Arg-33 to Lys-38, Pro-60 to Lys-67.	H0272: 2 and L0748: 1.
HTOCK26	523838	6101	2 - 187	15853	Ser-29 to Gln-34.	H0272: 2 and L0791: 1.
HTODB23	530149	6102	2 - 142	15854		H0264: 2
HTODC33	921426	6103	1 - 549	15855		L0766: 6, L0754: 4, L0779: 4, H0264: 2, L0747: 2 and L0777: 1.
HTODE04	927826	6104	3 - 209	15856		H0264: 3
HTODE78	530397	6105	20 - 160	15857	Asn-1 to Glu-7, Val-40 to Glu-47.	H0264: 2
HTODG07	880911	6106	90 - 215	15858	Gly-1 to Ser-7.	H0264: 2
HTODG10	968505	6107	38 - 157	15859	Glu-1 to Glu-10.	H0264: 2
HTODG16	909952	6108	1 - 492	15860	Arg-80 to Lys-88, Ser-94 to Arg-103.	AR089: 22, AR061: 6 H0264: 2 and L0766: 1.
HTODG47	799691	6109	48 - 221	15861	Pro-14 to Ala-19.	H0264: 3 and L0361: 1.
HTODG55	852560	6110	3 - 194	15862	His-2 to Pro-12.	H0264: 2 and H0521: 1.
HTODG58	869998	6111	3 - 122	15863	Ile-11 to Tyr-18, Met-29 to Gln-35.	H0264: 2
HTODG60	558007	6112	19 - 216	15864	Thr-23 to Asn-34, Gln-53 to Phe-58.	H0264: 2
HTODG83	676384	6113	1 - 135	15865	Arg-27 to Val-33.	H0264: 2
HTODH04	925386	6114	107 - 286	15866	Pro-31 to Lys-36.	H0264: 2
HTODH37	708892	6115	70 - 234	15867	Ser-27 to His-34.	S0114: 1 and H0264: 1.
HTODL81	507295	6116	47 - 178	15868	Val-3 to Gln-8.	H0264: 2
HTODL85	799701	6117	171 - 302	15869	Phe-38 to Leu-44.	H0264: 4 and H0179: 1.
HTODM58	811293	6118	3 - 215	15870	Ser-1 to Asn-12.	H0264: 3,
HTODN21	869967	6119	38 - 163	15871		H0264: 2

HTODN27	684343	6120	183 - 326	15872		H0581: 1, H0264: 1 and H0521: 1.		
HTODN68	527862	6121	4 - 147	15873	Asp-35 to Ser-40.	H0179: 1 and H0264: 1.	Yq11	400003, 415000
HTOEA06	960551	6122	86 - 211	15874	Lys-8 to Phe-14.	H0264: 3		
HTOEA12	967754	6123	166 - 357	15875	Ala-37 to Met-44.	H0264: 2		
HTOEA25	523546	6124	40 - 96	15876	Thr-9 to Asn-14.	H0264: 2		
HTOEC81	529834	6125	48 - 167	15877	Arg-1 to Thr-18.	H0264: 2		
HTOEC94	529839	6126	213 - 302	15878	Ser-25 to Arg-30.	H0264: 2		
HTOED10	839798	6127	61 - 318	15879	Gln-19 to Leu-24, Ser-28 to Gly-35.	H0069: 1 and H0264: 1.		
HTOED61	742158	6128	214 - 339	15880		S0142: 2 and H0264: 1.		
HTOEG69	967562	6129	3 - 149	15881		H0264: 2		
HTOET10	968492	6130	2 - 109	15882		H0264: 2		
HTOEV37	774641	6131	31 - 141	15883	Val-21 to Lys-33.	S0114: 1 and H0264: 1.		
HTOEV40	529822	6132	286 - 414	15884		H0264: 2		
HTOEV50	529820	6133	77 - 220	15885		H0264: 2		
HTOEY72	659494	6134	136 - 255	15886		H0264: 2		
HTOFA04	845519	6135	1 - 129	15887		H0087: 1 and H0264: 1.		
	869987	9604	158 - 289	19356				
	927327	9605	458 - 129	19357	Ala-1 to Lys-9, Lys-22 to Lys-28, Lys-37 to Asp-43.			
HTOFB55	723256	6136	110 - 256	15888		H0264: 2		
HTOFB73	742153	6137	3 - 164	15889		H0264: 2		
HTOFC70	811291	6138	65 - 355	15890		H0264: 2		
HTOFD10	968469	6139	2 - 133	15891	Ile-20 to Asp-32.	H0264: 2		
HTOFD31	529674	6140	2 - 76	15892		S0114: 1 and H0264: 1.		
HTOFD57	529673	6141	101 - 304	15893		H0264: 2		
HTOFO05	932662	6142	3 - 98	15894	Pro-5 to Leu-16.	H0083: 1 and H0264: 1.		
HTOFO41	529617	6143	34 - 111	15895	Tyr-3 to Leu-11, Arg-14 to Glu-19.	H0264: 2		
HTOFQ48	720880	6144	125 - 316	15896	Thr-12 to Asn-21, Pro-39 to Gln-45.	H0318: 1 and H0264: 1.		
HTOFT22	939903	6145	1870 - 2187	15897	Thr-11 to Gly-24, Pro-27 to Asn-37,	AR061: 6, AR089: 2 H0264: 2		

					Gln-44 to Glu-49, Arg-69 to Arg-84.	AR089: 8, AR061: 5
HTOFT34	963302	9606	750 - 905	19358		
	527144	6146	106 - 270	15898		H0264: 2 and L0367: 1.
HTOGA06	960554	6147	1 - 249	15899		H0264: 2
HTOGA25	529959	6148	37 - 156	15900		H0264: 2
HTOGA35	751989	6149	185 - 337	15901	Ala-11 to Thr-17.	L0750: 3, L0551: 2, L0748: 2, H0486: 1, L0455: 1, H0264: 1, S0002: 1, L0764: 1, L0791: 1 and L0740: 1.
HTOGA51	530331	6150	6 - 122	15902	Glu-23 to Lys-29.	H0264: 1 and H0272: 1.
HTOGB55	781591	6151	157 - 390	15903		H0264: 2
HTOGB92	529810	6152	40 - 132	15904	Lys-18 to Glu-24.	H0264: 2
HTOGC16	927835	6153	22 - 102	15905		H0264: 2
HTOGC20	960094	6154	191 - 334	15906	Thr-1 to Gly-13; Pro-26 to Leu-31.	H0318: 1 and H0264: 1.
HTOGD28	529806	6155	141 - 335	15907		H0264: 2
HTOGD43	650846	6156	2 - 172	15908	His-7 to Trp-12, Arg-15 to Trp-20, Tyr-22 to Trp-29.	H0264: 1 and H0445: 1.
HTOGD50	529805	6157	222 - 434	15909		H0264: 2 and L0766: 1.
HTOGI75	869973	6158	101 - 307	15910		H0264: 2
HTOGI86	507294	6159	3 - 332	15911	Pro-19 to Gly-24, Ser-41 to Ser-46.	H0264: 2
HTOGR50	529824	6160	139 - 231	15912	His-1 to Cys-10.	H0264: 2
HTOGR65	618316	6161	339 - 572	15913		L0749: 2, H0264: 1 and S0002: 1.
	869971	9607	292 - 624	19359		
	869972	9608	236 - 364	19360		
HTOGU30	961776	6162	13 - 105	15914	Phe-14 to Thr-24.	H0650: 1 and H0264: 1.
HTOHB03	924986	6163	2 - 193	15915		H0581: 1 and H0264: 1.
HTOHB42	714073	6164	361 - 158	15916		H0341: 1 and H0264: 1.
HTOHB66	966688	6165	559 - 768	15917	Pro-18 to Pro-27.	H0318: 4, L0748: 2, H0264: 1 and H0543: 1.

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HTOHC78	577745	6166	18 - 239	15918	Ser-1 to Pro-7, Ala-14 to Thr-25, Pro-38 to Pro-44, Val-62 to Gly-73.	H0264: 2	109270, 109270, 109270, 109270, 113705, 113705, 144200, 148065, 148066, 148066, 148067, 148067, 148069, 148080, 154275, 168610, 171190, 176705, 185800, 200350, 221820, 232200, 249000, 252920, 253250, 600119, 600119, 601363, 601844
HTOHC84	537370	6167	69 - 266	15919	Cys-50 to Gly-56.	H0264: 2	
HTOHD27	799676	6168	3 - 128	15920		H0264: 2	
HTOHF53	531172	6169	1 - 129	15921		S0114: 1 and H0264: 1.	
HTOHG55	537366	6170	133 - 252	15922		H0264: 2	
HTOHJ60	740611	6171	110 - 193	15923		H0318: 1 and H0264: 1.	
HTOHL22	968308	6172	113 - 241	15924		H0264: 2	
HTOHL35	537364	6173	1 - 201	15925	Arg-8 to Val-18, Arg-30 to Cys-36.	AR061: 1, AR089: 0 H0264: 2	
HTOHM54	537363	6174	78 - 266	15926	Pro-6 to Pro-14.	H0264: 2	
HTOHN24	971728	6175	3 - 122	15927	Lys-26 to Arg-33.	H0264: 2	
HTOHN42	537362	6176	28 - 147	15928	Ser-11 to Leu-16, Leu-20 to Arg-25.	H0264: 2	
HTOHP13	530350	6177	4 - 417	15929	Pro-11 to Ala-17.	H0264: 2, H0457: 1, H0271:17q21 1 and H0543: 1.	
HTOHS32	678071	6178	46 - 201	15930	Pro-20 to His-39, Pro-47 to Ser-52.	H0416: 1 and H0264: 1.	
HTOHS68	507136	6179	3 - 311	15931	Asp-7 to Lys-16.	H0264: 2	
HTOHU09	920734	6180	1 - 168	15932		H0264: 2 and S0116: 1.	
HTOHV29	527865	6181	2 - 151	15933	Pro-9 to Glu-14.	H0264: 2	

HTOHX74	507139	6182	1 - 246	Lys-1 to Ala-11, Pro-26 to Lys-41.	H0264: 2
HTOHZ61	537371	6183	274 - 405	Asn-1 to Tyr-6.	H0264: 2
HTOIA12	851032	6184	1 - 360		H0457: 1 and H0264: 1.
HTOIA68	584946	6185	2 - 139	Leu-1 to Arg-8.	H0264: 2
HTOIJ67	537354	6186	114 - 356	Pro-24 to Asn-32, Ala-36 to Gln-43, Asp-48 to Ala-57, Pro-66 to Arg-71.	H0264: 2
HTOIK06	954518	6187	34 - 210		S0114: 1, H0318: 1 and H0264: 1.
HTOIK08	959996	6188	238 - 483	Pro-10 to Gln-17.	L0766: 2, H0306: 1 and H0264: 1.
HTOIN17	537322	6189	1 - 276	Gly-1 to Leu-6.	H0264: 2
HTOIO29	506720	6190	63 - 230		H0264: 2
HTOIO36	537320	6191	92 - 244	Leu-38 to Ser-43.	H0264: 2
HTOIO79	537321	6192	1 - 174	Gly-1 to Arg-9.	H0264: 2
HTOIP32	869941	6193	207 - 470		H0264: 2
HTOIP53	557824	6194	122 - 289		H0264: 2
HTOIQ05	932440	6195	110 - 274	Gly-2 to Lys-9, Asp-15 to Trp-20.	H0264: 2
HTOIR12	537319	6196	229 - 80		H0264: 2
HTOIS27	485268	6197	282 - 413	Gly-24 to Ser-29.	H0264: 1, H0543: 1 and H0423: 1.
	934366	9609	188 - 292	Ala-23 to Glu-28.	
HTOIT32	418666	6198	2 - 94		H0271: 1 and H0264: 1.
HTOIW02	920752	6199	1 - 243	Ser-1 to Ser-11.	H0264: 2
HTOIW40	669595	6200	113 - 271		H0264: 1 and H0543: 1.
HTOIY09	836003	6201	40 - 258	Cys-1 to Glu-7, Ser-25 to Ser-32.	H0556: 1, H0264: 1 and H0422: 1.
HTOIZ34	707039	6202	107 - 241	Ser-6 to Gly-12, Arg-40 to Ala-45.	H0264: 1, H0625: 1, L0666: 1 and L0740: 1.
HTOJA65	456824	6203	213 - 353	Leu-1 to His-6, Pro-11 to Trp-16.	H0556: 2, H0265: 1 and H0264: 1.
HTOJA83	574764	6204	50 - 250	Gln-25 to Arg-30,	H0264: 2

HTOJA96	968510	6205	27 - 107	15957	Tyr-42 to Trp-50.	H0264: 2		
HTOJB59	574761	6206	176 - 316	15958	Gly-10 to Gly-15.	H0264: 2		
HTOJB67	726577	6207	245 - 466	15959	Ser-8 to Met-15, Gly-24 to Pro-29, Lys-63 to Ser-74.	H0445: 2 and H0264: 1.		
HTOJF65	715820	6208	89 - 262	15960		S0114: 1 and H0264: 1.		
HTOJG08	869926	6209	2 - 166	15961		H0264: 2		
HTOJI24	766963	6210	2 - 391	15962	Arg-43 to Trp-48.	H0341: 1, H0264: 1 and H0543: 1.		
HTOJJ17	574735	6211	18 - 155	15963		H0264: 2, L0748: 1 and L0749: 1.		
HTOJK48	574348	6212	29 - 217	15964		H0264: 2		
HTOJK79	531320	6213	3 - 245	15965		S0114: 1 and H0264: 1.		
HTOJK84	952741	6214	7 - 201	15966	Gly-32 to Ile-37.	H0264: 1 and H0445: 1.		
HTOIL55	825165	6215	8 - 139	15967		S0114: 1 and H0264: 1.		
HTOJL71	574529	6216	23 - 133	15968		H0264: 2		
HTOJM06	936089	6217	396 - 644	15969	Ser-35 to Ala-48, Ser-73 to Gly-82.	H0264: 1, S0428: 1 and S0053: 1.		
HTOJM70	799689	6218	1 - 159	15970		H0264: 3		
HTOJS81	711021	6219	1 - 195	15971		H0556: 1 and H0264: 1.		
HTOJT90	921016	6220	148 - 369	15972	Leu-1 to Thr-6.	H0341: 2, H0264: 2, L0471: 1 and H0542: 1.		
HTSAA22	415775	6221	2 - 181	15973		H0402: 1 and H0087: 1.		
HTSEU58	521995	6222	86 - 271	15974	Trp-10 to Lys-19, Gln-21 to Thr-48.	H0318: 1, H0087: 1 and L0747: 1.		
HTSFZ77	935620	6223	105 - 266	15975	Pro-29 to Asn-34, Glu-43 to Lys-49.	H0402: 3 and H0087: 1.		
HTSGB93	526625	6224	89 - 277	15976		H0087: 4 and L0752: 1.	20p11.2	121700, 122000, 188040
HTSGM65	576062	6225	151 - 309	15977		H0087: 2		
HTSGW24	971724	6226	295 - 609	15978	Ser-35 to Trp-44.	H0087: 1 and S0052: 1.		
HTSHA61	960474	6227	282 - 97	15979	Ala-47 to Phe-52.	H0087: 1 and H0116: 1.		
HTSHD86	773726	6228	182 - 499	15980		H0063: 1 and H0087: 1.		
HTSHF47	720403	6229	99 - 326	15981	Glu-1 to Pro-16.	H0486: 1 and H0087: 1.		

HTSHM38	972248	2 - 604	15982	Asn-6 to Ser-15, Pro-29 to Arg-42, Pro-91 to Gln-108, Lys-123 to Arg-133, Ile-157 to Phe-168, Gln-171 to Val-178, Gly-185 to Pro-197.	AR051: 26, AR054: 20, AR050: 18, AR089: 6, AR061: 2 H0087: 1 and H0264: 1.
HTUAA40	522671	190 - 330	15983		H0185: 1 and S0052: 1.
HTUAA86	522076	19 - 96	15984	Val-1 to Thr-11.	H0185: 2 and L0764: 1.
HTWAB64	522058	2 - 151	15985	Ile-1 to Ile-6.	H0187: 1 and H0576: 1.
HTWAH16	880725	139 - 243	15986		S0114: 1 and H0187: 1.
HTWAH51	614968	60 - 167	15987	Lys-16 to Lys-21.	H0187: 1 and H0576: 1.
HTWAM50	753217	2 - 232	15988		H0341: 1 and H0187: 1.
HTWBD74	716756	3 - 173	15989	Pro-1 to Gly-10, Pro-17 to Phe-24, Thr-33 to Val-45.	S0002: 1 and H0436: 1.
HTWBE77	781306	531 - 719	15990		H0436: 1, L0731: 1 and H0445: 1.
HTWBF61	579041	62 - 187	15991		S0114: 1 and H0436: 1.
HTWBF65	576623	114 - 605	15992	Gln-59 to Leu-65.	H0341: 1 and H0436: 1.
HTWBF82	854019	2 - 217	15993		H0436: 2
HTWBG40	711271	42 - 329	15994	Cys-7 to Ser-13.	H0436: 1, L0748: 1 and H0422: 1.
HTWBH73	708331	32 - 211	15995	Ser-6 to Asp-12.	H0436: 2
HTWBJ15	842014	3 - 314	15996	Asp-1 to His-6.	L0596: 2, H0436: 1, H0445: 1 and H0543: 1.
HTWBJ71	935647	115 - 228	15997	Thr-6 to Gln-12, Glu-16 to Cys-25, Pro-28 to Leu-34.	H0436: 2
HTWBL88	784364	2 - 178	15998	His-21 to Glu-27, Gly-49 to Lys-59.	H0402: 1 and H0436: 1.
HTWBN85	577510	1 - 81	15999		S0114: 1 and H0436: 1.
HTWBO55	732182	385 - 525	16000		H0436: 2 and L0439: 2.
HTWBR04	787303	3 - 317	16001		H0581: 1 and H0436: 1.
HTWBZ01	578678	1 - 102	16002	Arg-12 to Ser-33.	H0436: 2
HTWCA19	582498	131 - 436	16003		S0002: 1 and H0436: 1.

HTWCA76	770109	6252	3 - 149	16004	Phe-40 to Phe-45.	S0218: 1 and H0436: 1.	
HTWCD27	658018	6253	1 - 186	16005	His-4 to Glu-27.	H0318: 1 and H0436: 1.	
HTWCD40	670812	6254	166 - 348	16006		H0436: 2	
HTWCE72	575962	6255	150 - 272	16007	Gly-3 to Phe-11, Pro-13 to Lys-38.	H0436: 2	
HTWCF06	935641	6256	195 - 371	16008	Gln-17 to Ala-22.	H0306: 1 and H0436: 1.	
HTWCF25	924008	6257	1 - 219	16009	Pro-18 to Lys-25.	H0436: 4	
HTWCF94	747197	6258	132 - 347	16010	Ser-1 to Pro-7, Pro-45 to Gly-54, His-58 to Ser-67.	H0436: 2	
HTWCG45	548176	6259	1 - 165	16011	Lys-17 to Thr-26.	S0278: 1 and H0436: 1.	6q14	136550, 203310, 269920, 602772
HTWCG65	869547	6260	115 - 312	16012	Lys-31 to Lys-47.	AR089: 1, AR061: 0 H0650: 1 and H0436: 1.	
HTWCG69	575950	6261	3 - 92	16013	Ala-9 to Ala-17.	S0053: 1 and H0436: 1.	
HTWCI42	713022	6262	1 - 162	16014		H0436: 2	
HTWCK07	953482	6263	204 - 425	16015		S0114: 1 and H0436: 1.	
HTWCL29	740327	6264	2 - 79	16016	Ala-3 to Lys-13.	H0521: 1 and H0436: 1.	
HTWCM36	971129	6265	156 - 380	16017	Ser-2 to Ser-7.	H0305: 2, L0766: 2, H0436: 2, L0777: 2 and L0748: 1.	
HTWCM56	662321	6266	352 - 525	16018	Asn-1 to Gln-12.	S0142: 1 and H0436: 1.	
HTWCN33	577494	6267	230 - 475	16019	Ser-15 to Lys-20.	H0265: 1 and H0436: 1.	
HTWCN83	573580	6268	2 - 280	16020		H0305: 5 and H0436: 1.	
HTWCR25	575959	6269	138 - 338	16021		H0436: 2	
HTWCS11	967190	6270	94 - 204	16022		H0436: 2	
HTWCT42	713870	6271	1 - 150	16023		H0436: 2	
HTWCT61	575975	6272	86 - 232	16024		H0402: 2 and H0436: 1.	
HTWCX32	669745	6273	2 - 97	16025		H0436: 2, L0021: 1 and L0766: 1.	
HTWCY05	920337	6274	1 - 150	16026		H0436: 2	
HTWCY69	869553	6275	100 - 369	16027	Glu-26 to Lys-34.	H0436: 2	
HTWDB72	835624	6276	197 - 376	16028	Tyr-40 to Asp-45, Asn-52 to Ser-57.	H0436: 2	
HTWDF82	921697	6277	3 - 233	16029	Phe-10 to Tyr-22, Arg-45 to Gly-57,	H0179: 1 and H0436: 1.	

Clone		Range	SEQ ID	Amino acid positions	Info	
HTWDH14	669560	3 - 338	16030	Asp-68 to Asn-74. Ala-7 to Ser-12, Tyr-42 to Lys-50, Asn-62 to Ile-67, Thr-100 to Val-105.	H0521: 2, S0114: 1, L0654: 1, H0522: 1 and H0436: 1.	
HTWDH75	767368	138 - 302	16031		H0556: 1 and H0436: 1.	
HTWDM43	715352	147 - 314	16032	Pro-43 to Ser-51.	S0474: 2, H0436: 1, L0749: 1 and H0542: 1.	
HTWDN01	916680	75 - 221	16033	Glu-37 to Ala-42.	H0436: 2	
HTWDN17	664115	1 - 345	16034	Asn-50 to Gly-55, Gln-69 to Leu-74.	H0436: 1 and H0543: 1.	
HTWDQ60	575939	1 - 105	16035		H0436: 2	
HTWDS35	697825	3 - 374	16036	Glu-15 to Tyr-24, Lys-29 to Lys-34, Leu-38 to His-43, Arg-47 to Glu-57, Ser-65 to Gln-78, Arg-86 to Ala-91, Leu-95 to Gln-100, Gln-107 to Glu-115.	L0803: 1, H0521: 1 and H0436: 1.	
HTWEA61	965453	3 - 368	16037	Glu-24 to Thr-30, Ser-39 to Pro-44.	H0436: 2	
HTWEC63	735003	2 - 136	16038	Gln-1 to Glu-21.	S0114: 1 and H0436: 1.	
HTWED17	663714	257 - 370	16039		S0218: 1, H0370: 1 and H0436: 1.	
HTWED28	686598	269 - 400	16040	Arg-11 to Leu-19.	H0581: 1 and H0436: 1.	
HTWEG12	970538	3 - 167	16041	Arg-39 to Gly-49.	H0436: 2	
HTWEH16	661860	3 - 227	16042	Ser-42 to Ser-52, His-60 to Arg-70.	H0341: 1 and H0436: 1.	
HTWEJ14	792648	171 - 371	16043	Phe-11 to Cys-17.	H0436: 2	
HTWEM37	449136	3 - 260	16044	Pro-26 to Pro-36, Phe-54 to Gly-65.	H0264: 1 and H0436: 1.	
HTWEM63	745024	346 - 77	16045		H0436: 1 and H0423: 1.	
HTWER78	836799	16 - 378	16046		H0486: 1 and H0436: 1.	
HTWES75	767257	88 - 180	16047		H0436: 2	
HTWEU29	711673	3 - 224	16048	Arg-56 to Ser-65.	L0439: 2, T0041: 1, H0436:	1q21-q22	104770, 107670,

Clone					Residues	Contig	Gene list
HTWEX09	625458	6297	3 - 182	16049	Glu-1 to Ala-6.	1 and L0748: 1.	110700, 135940, 145001, 146790, 152445, 152445, 159001, 159440, 159440, 159440, 174000, 179755, 182860, 182860, 182860, 186780, 191030, 191315, 230800, 230800, 266200, 600897, 600923, 601105, 601412, 601652, 602491
HTWEX18	666305	6298	210 - 353	16050		H0436: 1 and H0444: 1.	
HTWEY30	918641	6299	661 - 434	16051	Ser-18 to Phe-27, Ser-30 to Ser-40, Thr-50 to Lys-55.	H0436: 1 and H0423: 1.	
HTWFB37	708908	6300	3 - 164	16052	Thr-45 to Gly-53.	H0436: 2 and L0751: 1.	
HTWFB75	767253	6301	85 - 243	16053	Asp-6 to Gly-12, Gln-23 to Gln-29, Arg-37 to Gly-49.	H0306: 1 and H0436: 1.	
HTWFF46	869499	6302	2 - 205	16054	Lys-25 to Trp-31, Arg-43 to Pro-53, Pro-59 to Lys-64.	S0116: 1, H0421: 1 and H0436: 1.	
HTWFG44	935270	6303	224 - 478	16055	Glu-31 to Gly-38, Ser-45 to Arg-50, Gly-56 to Ile-62, Pro-70 to Cys-81.	H0436: 5	
HTWFI19	668579	6304	216 - 332	16056	Pro-13 to Val-18, Pro-20 to Trp-29.	H0457: 1 and H0436: 1.	
HTWFK15	869498	6305	139 - 282	16057		H0436: 4	
HTWFM20	917272	6306	195 - 536	16058	Pro-77 to Thr-86.	H0436: 2	
HTWFN64	757593	6307	105 - 278	16059		S0114: 1, H0063: 1 and H0436: 1. / H0402: 1 and H0436: 1.	

HTWFO63	658473	6308	75 - 131	16060			H0542: 2, H0402: 1, H0318: 1, H0436: 1, L0753: 1 and L0758: 1.
HTWFP14	869489	6309	3 - 209	16061	His-9 to Gly-14.		H0436: 2
HTWFP33	916562	6310	79 - 309	16062	Arg-27 to Leu-33, Val-51 to Asp-56, Arg-64 to Gly-72.		H0402: 1, H0264: 1 and H0436: 1.
HTWFP53	721768	6311	272 - 400	16063	Pro-1 to Gly-6.		H0402: 1 and H0436: 1.
HTWFR17	663697	6312	20 - 253	16064			H0264: 1 and H0436: 1.
HTWJA24	954881	6313	281 - 538	16065			H0576: 2, S0002: 1 and L0599: 1.
HTWJA59	812705	6314	130 - 279	16066	Gly-30 to Gln-37.		H0576: 2
HTWJA83	780990	6315	70 - 216	16067	His-25 to Asn-35.		H0576: 2
HTWJA95	796259	6316	139 - 258	16068	Met-6 to Asn-11, Pro-34 to Gln-40.		H0576: 2
HTWJC43	715081	6317	49 - 207	16069	Ser-11 to Gly-20.		H0583: 1 and H0576: 1.
HTWJC75	767134	6318	3 - 77	16070	Glu-3 to Glu-13, Lys-15 to Asn-22.	2	H0576: 2
HTWJC85	757125	6319	200 - 334	16071	Arg-27 to Tyr-32.		H0556: 1 and H0576: 1.
HTWJF59	693116	6320	197 - 361	16072	Met-1 to Gly-25, Tyr-27 to Met-39.		H0576: 1 and H0444: 1.
HTWJF66	576164	6321	204 - 443	16073	Gln-5 to Phe-10.		H0255: 1, H0576: 1 and H0423: 1.
HTWJF95	745182	6322	78 - 248	16074			H0402: 1, H0576: 1 and H0423: 1.
HTWJH57	812698	6323	68 - 265	16075	Trp-4 to Ser-9, Pro-54 to Pro-61.		H0576: 1 and H0445: 1.
HTWJL91	789487	6324	243 - 368	16076			S0114: 1, H0576: 1 and L0750: 1.
HTWJM05	850055	6325	68 - 250	16077			H0402: 2 and H0576: 1.
HTWJO45	717592	6326	43 - 192	16078	Thr-25 to Thr-32, Arg-43 to Lys-49.		H0576: 2 and L0776: 1.
HTWJQ19	668466	6327	253 - 342	16079	Pro-23 to Val-29.		H0254: 1, H0576: 1 and H0422: 1.
HTWJY82	698335	6328	1 - 93	16080			S0114: 1 and H0576: 1.
HTWKG30	691882	6329	21 - 131	16081	Pro-1 to Trp-6.		H0589: 1 and H0576: 1.

HTWKN53	728014	6330	16082	3 - 269	Lys-12 to Met-24, Pro-43 to Asp-50, Glu-63 to Ser-68, Pro-73 to Ser-88.	H0576: 2
HTWKT61	709451	6331	16083	44 - 118	Leu-16 to Val-21.	H0576: 2
HTWKX27	574092	6332	16084	29 - 265		S0053: 1, H0576: 1 and L0748: 1.
HTWKZ04	614980	6333	16085	109 - 294	Phe-5 to Ile-11.	S0426: 1 and H0576: 1.
HTWKZ17	529749	6334	16086	234 - 365		H0265: 2 and H0576: 1.
HTWLD37	841951	6335	16087	89 - 400		S0053: 1 and H0576: 1.
HTWLG13	656772	6336	16088	2 - 160	Gln-43 to Gly-53.	H0255: 1 and H0576: 1.
HTWLG76	795694	6337	16089	267 - 539		S0182: 1 and H0576: 1.
HTXAK52	869460	6338	16090	7 - 264	Arg-1 to Gly-14.	H0265: 1 and H0318: 1.
HTXAK78	530137	6339	16091	174 - 347	Leu-30 to Thr-35.	H0265: 2
HTXAO23	676386	6340	16092	15 - 92		H0265: 1 and S0114: 1.
HTXBF75	963029	6341	16093	98 - 277	Ser-23 to Gln-40.	H0265: 1 and H0556: 1.
HTXBH24	418592	6342	16094	2 - 151		H0265: 2
HTXBJ36	529759	6343	16095	17 - 232	Ser-13 to Leu-19.	H0265: 2
HTXBJ92	706472	6344	16096	227 - 361		L0749: 2, H0265: 1, H0402: 1 and L0667: 1.
HTXBK75	869401	6345	16097	1 - 123		H0265: 2
HTXBN83	781443	6346	16098	3 - 101		H0265: 1 and S0218: 1.
HTXBO11	967750	6347	16099	176 - 400	Lys-25 to Pro-31.	H0265: 1 and H0421: 1.
HTXBO21	869461	6348	16100	2 - 193		H0265: 1 and H0542: 1.
HTXBO51	970855	6349	16101	146 - 592	Leu-1 to Gln-19, Ala-84 to Gly-99, Pro-128 to Arg-142.	L0777: 2, H0265: 1, H0556: 1, H0255: 1, L0662: 1, L0375: 1, L0378: 1 and L0519: 1.
HTXBX49	529662	6350	16102	91 - 195		H0265: 2
HTXBX77	529661	6351	16103	120 - 353	Ser-59 to Gln-64.	H0265: 2
HTXCB32	529615	6352	16104	199 - 402	Pro-21 to Lys-32.	H0265: 2 and L0596: 1.
HTXCL28	952022	6353	16105	56 - 175		H0265: 2 and H0556: 1.
HTXCU76	765655	6354	16106	188 - 589	Cys-122 to His-131.	H0265: 1, H0556: 1, H0457: 1 and L0766: 1.
HTXCW16	522365	6355	16107	50 - 265	Val-10 to Cys-17.	H0265: 2

HTXCW27	491257	6356	378 - 166	16108		H0265: 1 and H0522: 1.		
HTXCX05	932476	6357	148 - 303	16109		H0265: 1 and H0556: 1.		
HTXCY16	537413	6358	1 - 231	16110	Arg-12 to Gly-21, Ala-23 to His-32, Ala-59 to Gln-71.	H0265: 2		
HTXCY84	924996	6359	2 - 241	16111		H0265: 2		
HTXCZ16	537485	6360	213 - 416	16112	Glu-14 to Asp-19.	H0265: 2		
HTXDG37	968886	6361	71 - 466	16113	Arg-5 to Gly-13.	AR051: 14, AR050: 13 H0265: 1, L0637: 1, L0766: 1 and H0521: 1.		
HTXDI51	537474	6362	86 - 235	16114	Ser-28 to Val-34, Leu-43 to Arg-48.	H0265: 2		
HTXDO50	537487	6363	120 - 314	16115		H0265: 2		
HTXDQ25	869369	6364	1 - 306	16116	Ser-4 to Ser-15.	H0265: 1 and H0556: 1.		
HTXDS80	869435	6365	2 - 82	16117	Pro-1 to Lys-9.	H0265: 2		
HTXDW14	966588	6366	1145 - 432	16118	Tyr-17 to Asp-22, Pro-75 to Ser-81.	H0265: 1, H0583: 1 and L0741: 1.		
HTXDX61	784768	6367	1 - 423	16119	Arg-1 to Asp-16.	AR061: 6, AR089: 3 H0265: 1, H0264: 1, H0488: 1 and H0543: 1.		
HTXDX82	931113	6368	307 - 513	16120	Leu-20 to His-31.	H0265: 1 and H0556: 1.		
HTXDZ01	921486	6369	62 - 223	16121		H0265: 2 and S0134: 1.		
HTXEA41	974530	6370	198 - 422	16122	Thr-1 to Trp-10, Phe-18 to Arg-25.	H0265: 2		
HTXEA62	812833	6371	22 - 294	16123		H0265: 1 and S0428: 1.		
HTXEC53	529755	6372	118 - 369	16124	Thr-1 to Asn-7, Phe-21 to Ser-27.	H0265: 2 and L0589: 1.		
HTXEE70	537405	6373	2 - 157	16125	Pro-26 to Pro-37.	H0265: 1 and H0264: 1.		
HTXEM54	764221	6374	109 - 261	16126	Arg-4 to Pro-11, Thr-45 to Glu-50.	H0265: 2	17p13	138190, 254210, 271900, 600179, 600977, 601202, 601777
HTXEP20	537483	6375	3 - 194	16127	Gly-1 to Gln-9, Trp-11 to Arg-21, Gly-26 to Lys-32, Ala-38 to Phe-50.	H0265: 2		

HTXEP49	722181	6376	191 - 400	16128		L0589: 2, H0265: 1 and H0090: 1.
HTXEP76	527697	6377	114 - 365	16129		H0265: 1, H0305: 1 and S0426: 1.
HTXEQ05	932471	6378	65 - 235	16130		H0265: 2 and H0305: 1.
HTXET61	537471	6379	3 - 191	16131		H0265: 2
HTXET67	783784	6380	68 - 211	16132		H0265: 1 and H0556: 1.
HTXET75	664468	6381	1 - 174	16133		H0265: 1 and S0053: 1.
HTXEW14	932437	6382	37 - 219	16134	Lys-5 to Ala-11.	H0265: 2
HTXFB03	924995	6383	176 - 316	16135	Pro-15 to Gly-32.	H0265: 2, S0134: 1, S0474: 1, L0662: 1, H0576: 1 and L0599: 1.
HTXFB78	869408	6384	3 - 263	16136	Pro-34 to Phe-40.	H0265: 1 and H0556: 1.
HTXFB95	537399	6385	3 - 332	16137	Trp-21 to Gln-26, Thr-37 to Ser-43, Glu-78 to Cys-84.	H0265: 2
HTXFC07	918644	6386	254 - 430	16138	Gln-27 to Arg-32.	H0265: 1, H0556: 1 and L0749: 1.
HTXFD75	537401	6387	94 - 231	16139	Ser-23 to Thr-28.	H0265: 2
HTXFE47	790855	6388	189 - 464	16140		H0556: 20, H0265: 8, H0638: 1, H0660: 1, H0521: 1 and L0749: 1.
HTXFF04	615593	6389	399 - 653	16141	Lys-18 to Pro-26.	H0265: 1, H0318: 1 and L0748: 1.
HTXFF66	973429	6390	91 - 438	16142	Pro-27 to Ser-32, Glu-41 to Ser-47, His-85 to Trp-90, Glu-92 to Val-111.	H0265: 2 and H0556: 1.
HTXFF91	780083	6391	145 - 258	16143		H0265: 2
HTXFI58	557838	6392	2 - 151	16144	Thr-8 to Trp-19, Glu-24 to Tyr-29.	H0265: 2
HTXFK45	523385	6393	108 - 218	16145	Tyr-12 to Tyr-24.	H0265: 2
HTXFN69	869397	6394	3 - 476	16146	Val-7 to Phe-14, Gln-32 to Glu-39.	H0265: 1, H0556: 1 and H0607: 1.
HTXFQ65	926534	6395	442 - 549	16147	Asp-9 to Lys-14.	H0265: 1 and H0370: 1.
HTXFS95	796025	6396	23 - 325	16148	Pro-22 to Val-30.	H0265: 1, H0556: 1 and

HTXFT03	924952	2 - 100	16149		S0216: 1.
HTXFT60	923937	2 - 244	16150	Ala-1 to Cys-9, Cys-13 to Gly-18.	H0556: 7, H0265: 1 and L0748: 1.
HTXFV22	537491	167 - 322	16151		H0265: 1 and H0556: 1.
HTXGB20	933878	1 - 93	16152		H0265: 2
HTXGB65	577711	182 - 448	16153	Met-26 to Pro-39.	H0265: 1 and H0556: 1.
HTXGD30	529724	63 - 185	16154	Gly-5 to Leu-12.	H0305: 2, H0265: 1, H0589: 1 and L0592: 1.
HTXGL73	529745	15 - 242	16155		H0265: 2 and H0556: 1.
HTXGN76	527016	246 - 500	16156		H0265: 2 and H0556: 2.
HTXGO74	869391	1 - 84	16157		H0265: 2 and H0318: 1.
HTXGQ37	575461	49 - 306	16158	Gly-40 to Lys-46.	H0265: 2
HTXHA16	661818	46 - 351	16159	Gly-17 to Gln-23.	H0265: 1 and S0114: 1.
HTXHD24	727469	53 - 274	16160		H0265: 2
HTXJA66	698461	26 - 238	16161	Lys-41 to Leu-51.	H0265: 2 and H0556: 1.
HTXJB15	660059	131 - 277	16162		H0265: 1 and H0556: 1.
HTXJB35	707768	43 - 348	16163	Gly-60 to Gly-67.	H0556: 2
HTXJC65	666565	1 - 177	16164	Thr-11 to Tyr-19, Phe-32 to Phe-38.	H0556: 1, H0625: 1, L0603: 1 and L0697: 1.
HTXJE76	745813	166 - 318	16165		H0556: 1, L0520: 1, L0794: 1 and H0422: 1.
HTXJF30	692607	106 - 456	16166		H0265: 1 and H0556: 1.
HTXJG06	933230	161 - 379	16167	Lys-1 to Gly-20, Leu-31 to Phe-36, Met-39 to Gly-48, Gln-57 to Arg-67.	H0556: 1, H0421: 1 and L0766: 1.
HTXJG19	974010	213 - 335	16168	Ser-24 to Lys-31, Val-45 to Ser-50.	H0543: 2, H0265: 1, H0556: 1 and H0423: 1.
HTXJG23	675315	265 - 414	16169	Gly-19 to Gly-24, Ser-75 to Gly-83.	H0265: 1 and H0556: 1.
HTXJG53	752160	2 - 307	16170	Val-37 to Glu-42.	H0556: 3
HTXJH73	582143	152 - 304	16171		L0742: 2, H0556: 1, H0255: 1 and L0754: 1.
					H0265: 1 and H0556: 1.

HTXJI68	912611	6420	1 - 297	16172	Ile-2 to Cys-14, Asp-38 to Leu-43.	H0556: 2
HTXJJ55	959169	6421	61 - 288	16173		H0556: 2
HTXJK23	675782	6422	77 - 340	16174	Pro-7 to Pro-14, Pro-55 to Ser-61, Gly-70 to Asp-76.	H0556: 1 and S0002: 1.
HTXJL01	916254	6423	116 - 334	16175		S0052: 3, H0556: 1 and L0777: 1.
HTXJL02	919691	6424	259 - 483	16176		H0556: 1, H0650: 1 and L0759: 1.
HTXJM73	783572	6425	1 - 138	16177	Gly-3 to Pro-11.	H0556: 2
HTXJN04	566887	6426	298 - 684	16178	Ser-41 to Ser-49, Gly-77 to Arg-83, Arg-91 to Arg-96.	AR051: 46, AR050: 46, AR054: 28 H0556: 2 and H0265: 1.
HTXJN68	752940	6427	79 - 288	16179	Gln-13 to Thr-18.	H0556: 1 and S0002: 1.
HTXJO34	703973	6428	82 - 225	16180	Arg-8 to Asp-17.	H0265: 1 and H0556: 1.
HTXJO61	663153	6429	2 - 361	16181	Pro-20 to Arg-28.	H0556: 2
HTXJO85	869123	6430	24 - 341	16182	Arg-52 to Ser-57, Gly-67 to Cys-78.	H0556: 2 and L0599: 1.
HTXJP28	974315	6431	35 - 355	16183		H0265: 1, H0556: 1 and H0635: 1.
HTXJQ73	719077	6432	373 - 513	16184	Ile-7 to Ser-12.	H0556: 1 and S0052: 1.
HTXJR67	739586	6433	3 - 182	16185		H0265: 1 and H0556: 1.
HTXJS64	746481	6434	430 - 570	16186	Gln-5 to Arg-12, Arg-16 to Cys-27.	H0556: 1, H0581: 1 and H0445: 1.
HTXJV49	867083	6435	235 - 726	16187	Leu-21 to Glu-32, Gly-39 to Ser-63.	H0265: 1 and H0556: 1.
HTXJW56	859854	6436	2 - 295	16188	Lys-1 to Thr-10.	H0556: 1 and S0216: 1.
HTXJY51	872233	6437	8 - 229	16189	Lys-1 to His-7, Cys-37 to Arg-43.	H0556: 1, S0052: 1 and H0521: 1.
HTXKB42	841986	6438	135 - 326	16190	Lys-19 to Thr-30.	H0556: 2
HTXKC23	529756	6439	90 - 233	16191		H0556: 4, H0265: 2 and L0601: 1.
HTXKD62	743435	6440	1 - 285	16192	Pro-10 to Lys-16, Asn-22 to Pro-33.	H0265: 1 and H0556: 1.
HTXKH47	720186	6441	202 - 330	16193		H0556: 2

HTXKI93	796245	6442	1 - 264	Cys-9 to Gly-14.	H0265: 1, H0556: 1 and L0748: 1.	12	
HTXKJ55	671285	6443	121 - 315	His-2 to His-7.	H0265: 1, H0556: 1 and L0543: 1.		
HTXKJ58	574788	6444	1 - 486	Arg-1 to Leu-11, Ser-54 to Val-59, Gly-61 to Tyr-67, Pro-76 to Pro-94, Glu-99 to Ala-104.	H0271: 7, H0556: 1 and H0416: 1.		
HTXKJ89	767234	6445	203 - 385	Thr-7 to Trp-15, Pro-19 to Ile-25, Gly-42 to Val-47.	H0556: 2		
HTXKJ95	795788	6446	43 - 234	Pro-42 to Arg-47.	H0556: 2		
HTXKK62	751050	6447	3 - 347		H0556: 1, S0278: 1, L0805: 1 and H0422: 1.	12q22	147440, 201470, 235800, 273300
HTXKM25	664886	6448	2 - 175	Glu-1 to Trp-13, His-36 to Arg-41.	H0265: 1 and H0556: 1.		
HTXKM84	782951	6449	31 - 216		H0265: 1 and H0556: 1.		
HTXKN90	787551	6450	190 - 309		H0556: 3		
HTXKP42	713631	6451	321 - 452	Lys-5 to Asn-11.	L0439: 4 and H0556: 2.		
HTXKQ25	934801	6452	137 - 364	Glu-22 to His-37, Phe-67 to Arg-76.	H0556: 1, S0218: 1 and L0754: 1.		
HTXKQ55	947789	6453	3 - 305	Asp-21 to Lys-26.	AR061: 2, AR089: 2 H0265: 1 and H0556: 1.	13q12	1210111, 1210111, 129500, 253700, 601885, 602221
HTXKS02	919676	6454	84 - 293		H0556: 2		
HTXKU69	754404	6455	42 - 410	Arg-7 to Ala-19.	H0556: 2 and L0757: 1.		
HTXKV16	869348	6456	221 - 376	Arg-1 to Thr-10, Met-25 to Asp-39.	H0556: 2		
HTXKV38	918567	6457	7 - 192		H0556: 3 and H0445: 1.		
HTXKZ289	786409	6458	186 - 305		H0063: 2 and H0556: 1.		
HTXLA63	917316	6459	140 - 409	Leu-1 to Ala-6, Ser-48 to Lys-53.	H0556: 1, S0114: 1 and S0116: 1.		
HTXLD06	934555	6460	243 - 491	Tyr-37 to Gly-43, Arg-45 to Val-52, Lys-63 to Gly-70.	H0556: 2 and S0052: 1.		

HTXLD68	752484	6461	3 - 272	16213	His-7 to Gly-17, Glu-23 to Ile-31, Ala-38 to Phe-43.	H0265: 1, H0556: 1 and H0436: 1.
HTXLE37	790392	6462	22 - 228	16214		H0265: 1, H0556: 1 and L0545: 1.
HTXLE56	861983	6463	350 - 535	16215	Lys-14 to Ser-19, Gln-36 to Arg-43.	H0556: 1, H0300: 1 and H0179: 1.
HTXLE75	766798	6464	404 - 670	16216	Thr-1 to Lys-10, Glu-36 to Cys-50.	H0556: 1, H0264: 1, L0804: 1 and H0445: 1.
HTXLE79	774125	6465	76 - 420	16217	Trp-29 to Arg-35.	H0265: 1 and H0556: 1.
HTXLF08	958421	6466	3 - 119	16218	Ala-6 to Arg-11.	H0556: 1, L0665: 1, L0750: 1 and H0445: 1.
HTXLG57	790610	6467	1 - 306	16219	Arg-28 to Gln-35, Thr-44 to Lys-51, Lys-55 to Gly-61.	H0556: 1 and H0090: 1.
HTXLG64	974598	6468	392 - 667	16220		H0265: 2 and H0556: 1.
HTXLH60	869336	6469	275 - 421	16221		H0556: 2
HTXLI65	974018	6470	277 - 456	16222		H0556: 2 and H0265: 1.
HTXLI91	787577	6471	178 - 381	16223	Gln-29 to Gln-35, Ser-58 to Gln-67.	H0556: 2
HTXLJ70	756679	6472	401 - 631	16224	Arg-36 to Ala-42.	H0556: 1 and H0271: 1.
HTXLK35	840283	6473	249 - 455	16225		L0766: 2, H0556: 1, H0656: 1, H0255: 1, L0740: 1, L0749: 1, H0444: 1 and L0592: 1.
HTXLK95	795355	6474	161 - 286	16226	Arg-1 to Ser-15.	H0265: 1 and H0556: 1.
HTXLL78	773071	6475	1 - 183	16227	Thr-24 to Gln-34.	H0556: 2
HTXLL89	786475	6476	114 - 287	16228	Pro-41 to Thr-46.	H0556: 3 and H0265: 1.
HTXLN72	951958	6477	3 - 158	16229		H0556: 3
HTXLO02	918658	6478	126 - 356	16230		H0556: 2 and L0748: 1.
HTXLO14	869332	6479	167 - 358	16231		H0556: 2
HTXLP15	869202	6480	206 - 466	16232	Glu-27 to Met-32.	H0556: 4
HTXLP18	973431	6481	67 - 279	16233	Glu-14 to His-21, His-36 to Lys-45.	H0556: 5 and H0265: 1.
HTXLQ28	869331	6482	1 - 267	16234	Ser-8 to Asp-13, Gly-26 to Trp-32,	H0556: 2 and H0265: 1.

HTXLT33	919761	6483	1 - 147	16235	Arg-44 to Leu-49. Ser-18 to Asp-24.		H0556: 1 and H0543: 1.	
HTXLU64	783411	6484	63 - 266	16236	Gln-9 to Phe-14, Asn-27 to Asn-32.		H0265: 1 and H0556: 1.	
HTXLU82	779215	6485	1 - 297	16237	Pro-33 to Ser-43, Glu-59 to Phe-64.		H0265: 1 and H0556: 1.	
HTXLV39	972762	6486	210 - 482	16238			H0556: 2 and S0114: 1.	
HTXLY02	866819	6487	185 - 379	16239	Pro-13 to Arg-18, Leu-39 to Asn-44, Ser-58 to Tyr-63.		H0556: 1 and S0114: 1.	
HTXMC82	779198	6488	181 - 525	16240	Gln-31 to Phe-36.		H0556: 2 and H0265: 1.	
HTXMH13	928105	6489	319 - 480	16241	Ala-1 to His-7.		H0265: 1 and H0556: 1.	
HTXMH80	775487	6490	528 - 803	16242			H0556: 1 and H0069: 1.	
HTXMI18	921101	6491	82 - 282	16243			H0556: 1 and T0041: 1.	
HTXMI62	870456	6492	1 - 402	16244	Arg-4 to Pro-13, Gly-45 to Val-52.		H0556: 2	
HTXMJ03	923001	6493	141 - 350	16245			H0265: 1 and H0556: 1.	
HTXMJ50	830027	6494	2 - 358	16246	Asp-1 to Glu-6, Ile-14 to Ala-21, Pro-49 to Phe-67, His-73 to Ser-98.	Xq21	H0265: 2, H0556: 1 and L0748: 1.	305450, 309600, 309605, 311360, 314580
HTXMO28	823172	6495	2 - 232	16247	Gln-7 to Ala-17.		H0556: 2 and L0589: 1.	
HTXMO81	869319	6496	210 - 536	16248			H0556: 2 and L0415: 1.	
HTXMP92	972759	6497	291 - 566	16249	Pro-10 to Asn-16.		H0556: 2 and H0265: 1.	
HTXMQ07	952206	6498	115 - 294	16250	Asp-1 to Asn-6.		H0556: 1, S0218: 1 and H0591: 1.	
HTXMT06	933376	6499	50 - 247	16251	Lys-61 to Ala-66.		H0265: 1 and H0556: 1.	
HTXMU10	961472	6500	2 - 100	16252	Ser-15 to Ala-20.		H0556: 2 and H0090: 1.	
HTXMX03	923005	6501	578 - 763	16253	Ser-22 to Lys-27.		H0556: 2, H0445: 2, L0748: 1 and H0444: 1.	
HTXMX32	789063	6502	3 - 212	16254	Glu-8 to Lys-13.		H0556: 1 and H0063: 1.	
HTXMX41	789332	6503	247 - 459	16255	Cys-10 to Ala-17, Thr-39 to Pro-45.		H0556: 1, H0063: 1, L0375: 1, L0750: 1 and L0758: 1.	
HTXMY15	780129	6504	253 - 501	16256	Glu-1 to Asn-9.		H0556: 2 and H0179: 1.	
HTXMY23	835044	6505	522 - 217	16257	Asp-19 to Val-24.		AR051: 38, AR050: 35,	

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Clone						AR054: 32 H0556: 1 and S0002: 1.
HTXMZ91	835045	9610	642 - 361	19362		
HTXND08	789619	6506	26 - 148	16258	Ile-33 to Ser-40.	H0556: 2
HTXND08	869311	6507	379 - 618	16259		H0556: 3, H0583: 1 and H0625: 1.
HTXND91	789706	6508	317 - 592	16260		H0556: 1 and S0114: 1.
HTXNF56	974048	6509	125 - 373	16261		H0556: 2 and H0265: 1.
HTXNJ80	966045	6510	151 - 282	16262		H0556: 2
HTXNM82	973993	6511	218 - 346	16263		H0556: 3
HTXNN03	922997	6512	262 - 405	16264		H0556: 2
HTXNN33	780965	6513	692 - 483	16265	Gly-5 to Leu-10.	H0556: 5, L0766: 2, H0265: 1, H0521: 1 and L0748: 1.
HTXNO48	963444	6514	154 - 255	16266		H0556: 2
HTXNO58	916249	6515	115 - 414	16267	Gln-17 to Glu-39, Gln-62 to Lys-67, Leu-71 to Gln-76.	H0556: 2
HTXNQ06	934303	6516	157 - 288	16268		H0556: 1 and H0445: 1.
HTXNQ63	951939	6517	29 - 229	16269	Pro-1 to Gly-9, Lys-16 to Cys-27.	H0556: 3
HTXNR01	913781	6518	151 - 396	16270		H0556: 2, H0265: 1, H0255: 1 and H0444: 1.
HTXNR17	856465	6519	45 - 479	16271	Arg-1 to Lys-14, Glu-37 to Gly-43, Cys-47 to Gly-57, Ala-103 to Gly-108.	H0556: 8, H0265: 1, S0114: 1, H0445: 1 and H0542: 1.
HTXNT07	952165	6520	182 - 775	16272	Pro-14 to Pro-28.	L0740: 3, L0777: 2, H0556: 1, S0114: 1 and L0780: 1.
HTXNT43	869398	6521	509 - 664	16273		H0265: 1 and H0556: 1.
HTXNT76	869189	6522	481 - 732	16274		H0556: 2, L0439: 2, L0438: 1, L0747: 1 and L0749: 1.
HTXNU51	972837	6523	3 - 350	16275		H0556: 3
HTXNY70	869289	6524	67 - 315	16276	Val-27 to Leu-32.	H0556: 2
HTXNY74	918076	6525	36 - 536	16277	Arg-1 to Gly-7, Phe-11 to Arg-23.	H0556: 2 and H0179: 1.
HTXOC32	869280	6526	394 - 639	16278		H0556: 2 and H0265: 1.

HTXOD62	806643	6527	13 - 234	16279		H0556: 1 and H0522: 1.
HTXOG84	929289	6528	20 - 358	16280	His-2 to Gly-10, Glu-22 to Arg-28.	H0265: 1, H0556: 1, H0657: 1 and H0543: 1.
HTXOH04	926909	6529	119 - 295	16281		H0556: 2
HTXOH60	869271	6530	2 - 172	16282		H0265: 1 and H0556: 1.
HTXOJ50	869279	6531	348 - 554	16283		H0556: 4
HTXOJ92	974039	6532	280 - 477	16284	Asn-1 to Arg-11, Pro-13 to Ser-24.	H0265: 2, H0556: 2, H0255: 2 and H0423: 1.
HTXOM10	963435	6533	1 - 108	16285	Met-13 to His-21.	H0265: 1 and H0556: 1.
HTXOO06	934248	6534	347 - 535	16286	Thr-55 to Gln-61.	H0556: 2, L0749: 2, S0218: 1 and L0748: 1.
HTXOO83	898860	6535	105 - 410	16287		H0556: 3, S0052: 2, S0134: 1, H0306: 1 and S0053: 1.
HTXOR11	965090	6536	2 - 148	16288	Lys-1 to Glu-6.	H0556: 2
HTXOR48	869253	6537	262 - 591	16289	Pro-46 to Gln-52, Thr-61 to Val-70.	H0556: 2 and L0595: 1.
HTXOR86	914739	6538	64 - 255	16290	Gln-35 to His-44.	H0556: 4
HTXOS47	965558	6539	34 - 198	16291	Gln-1 to Gly-8.	H0556: 3, L0759: 3, S0212: 1 and L0805: 1.
HTXOT42	974034	6540	74 - 433	16292		H0556: 7, H0265: 1 and L0748: 1.
HTXOU06	852057	6541	329 - 547	16293		H0556: 2 and H0486: 1.
HTXOU48	869252	6542	2 - 262	16294	Lys-1 to Tyr-11, Thr-13 to Lys-21, Ser-79 to Arg-87.	H0556: 2
HTXOU67	906909	6543	229 - 414	16295	Pro-22 to Ser-28.	H0556: 2
HTXOX02	918556	6544	329 - 553	16296	Arg-8 to Arg-14.	H0556: 1 and H0318: 1.
HTXOX42	920274	6545	209 - 553	16297	Pro-45 to Ser-53.	H0255: 2 and H0556: 1.
HTXOZ02	918566	6546	95 - 289	16298		H0556: 2
HTXPF93	954976	6547	2 - 178	16299		AR051: 33, AR054: 28, AR050: 24 H0556: 2
HTXPJ03	922877	6548	274 - 486	16300		H0556: 1 and H0271: 1.
HTXPK10	963397	6549	112 - 450	16301	Ser-1 to Thr-13.	H0556: 2 and H0521: 1.
HTXPK28	957888	6550	55 - 231	16302		H0556: 4 and H0265: 1.

HTXPO91	869224	6551	114 - 350	16303	Gln-23 to Leu-28, Trp-66 to Gln-74.	H0436: 2 and H0556: 1.
HTXPO92	869214	6552	330 - 518	16304	Thr-30 to Thr-37.	H0556: 2
HTXPP33	799925	6553	3 - 635	16305		AR054: 10, AR050: 8, AR051: 2 H0265: 2 and H0556: 1.
HTXPR92	869221	6554	36 - 320	16306	Arg-15 to Ser-21, Arg-25 to Gly-30, Lys-74 to Lys-81.	H0556: 2
HTXPT68	870074	6555	2 - 469	16307	Pro-46 to Ser-51.	AR089: 2, AR061: 2 H0556: 2
HTXPW03	922884	6556	94 - 330	16308		H0265: 1 and H0556: 1.
HTXPW20	869198	6557	252 - 485	16309	Leu-12 to Glu-24, Lys-52 to Ala-57.	H0556: 2
HTXPX02	918494	6558	117 - 470	16310	Leu-7 to Gly-17, Thr-20 to Glu-29, Gln-45 to Phe-52, Phe-56 to Tyr-61, Glu-102 to Gln-116.	H0556: 2, H0265: 1 and L0523: 1.
HTXQA18	869184	6559	375 - 605	16311	Thr-31 to Pro-38, Pro-68 to Gln-73.	S0114: 3 and H0556: 1.
HTXQC36	961161	6560	337 - 522	16312	Arg-37 to Tyr-44.	H0556: 1 and H0255: 1.
HTXQC77	974033	6561	444 - 698	16313	Ser-2 to Ser-8.	H0556: 3 and H0265: 1.
HTXQF10	963403	6562	386 - 541	16314		H0265: 1 and H0556: 1.
HTXQM11	965645	6563	121 - 303	16315	Thr-5 to Gly-10, Glu-52 to Leu-60.	H0556: 1 and S0053: 1.
HTXQN24	963503	6564	1 - 447	16316	Pro-6 to Gly-12.	H0556: 2 and L0758: 1.
HTXQR90	869139	6565	2 - 421	16317	Met-11 to His-26, Ser-62 to Ser-67, Ala-71 to Pro-77.	H0265: 1 and H0556: 1.
HTXQU07	952030	6566	43 - 189	16318		H0556: 1 and H0543: 1.
HTXQW02	918081	6567	196 - 459	16319		H0556: 2
HTXQW29	869134	6568	105 - 386	16320		H0556: 2 and T0041: 1.
HTXRA11	965596	6569	221 - 397	16321		H0556: 2
HTXRB38	869133	6570	20 - 193	16322	Gln-1 to Gly-9, Lys-47 to Ser-53.	H0556: 1 and H0486: 1.

HTXRC17	973981	6571	91 - 330	16323	Gln-7 to Lys-13, Trp-65 to Thr-72.	H0556: 2 and S0218: 1.		
HTXRD51	921285	6572	13 - 219	16324	Pro-11 to Ala-18, Ser-38 to Arg-44, Lys-59 to Pro-68.	H0556: 1 and H0069: 1.		
HTXRE04	926371	6573	3 - 227	16325	Gln-1 to Pro-10, Pro-32 to Arg-50.	H0556: 2		
HTXRJ02	918031	6574	1 - 321	16326	Ser-5 to Ser-15, Gly-73 to Asp-86.	H0556: 1 and H0318: 1.		
HTXRM86	975072	6575	3 - 578	16327		AR061: 2, AR089: 1 H0556: 3		
HTXRO02	918009	6576	99 - 206	16328		H0556: 2		
HTXSB88	914627	6577	541 - 846	16329	Lys-26 to Glu-31, Ala-42 to Tyr-49, Glu-79 to Trp-95.	H0556: 1, H0650: 1 and L0731: 1.		
HTXSK91	915903	6578	298 - 462	16330	Glu-4 to Ser-14, Asp-20 to Leu-25.	H0556: 1 and H0521: 1.	Xp21.1	301220, 302350, 306400, 309470, 309585, 311250, 312040, 312610, 314850
HTXSR92	973095	6579	132 - 428	16331		AR089: 0, AR061: 0 H0265: 1, H0556: 1 and H0083: 1.		
HTYNC52	869119	6580	451 - 251	16332	Leu-21 to Gly-27, Pro-39 to Lys-57.	S0216: 1 and S0452: 1.		
HTYSB62	768350	6581	26 - 250	16333	Val-1 to Ile-8, Glu-64 to Leu-72.	H0116: 2		
HTYSD32	702994	6582	1 - 258	16334		H0581: 1, H0116: 1 and L0746: 1.		
HTZAB04	973811	6583	382 - 648	16335	Thr-1 to Val-7.	S3018: 2 and S0140: 1.		
HUJAB25	878465	6584	3 - 353	16336	Gly-79 to Cys-84.	H0650: 2		
HUJAG07	951873	6585	215 - 3	16337	Tyr-2 to Thr-8, Lys-65 to Lys-71.	L0766: 4, H0318: 3, H0650: 1, L0772: 1 and L0774: 1.		
HUJAM39	911399	6586	631 - 1323	16338	Arg-1 to Trp-7, Arg-14 to Cys-32, Gln-65 to Leu-75.	H0457: 4, H0650: 1, H0656: 1, H0255: 1, H0641: 1 and L0766: 1.		

HUJBL07	951874	6587	1 - 195	16339		H0650: 1 and H0318: 1.		
HUJCB67	958914	6588	2 - 265	16340		H0318: 2, H0650: 1 and H0488: 1.		
HUJCM08	957784	6589	2 - 733	16341	Arg-9 to Trp-15, Ser-36 to Lys-49, Glu-95 to Ala-104, Pro-113 to His-118, Arg-124 to Gly-130, Arg-146 to Asp-153, Arg-159 to Arg-168.	H0585: 2 and H0650: 1.	5p15.33	
HUJCT61	933920	6590	304 - 606	16342	Pro-35 to Pro-40.	H0265: 1, H0556: 1 and H0650: 1.		
HUJCV04	926175	6591	3 - 329	16343	Arg-1 to Met-8.	H0650: 1 and H0580: 1.		
HUJDB08	957786	6592	579 - 773	16344		H0650: 1, H0318: 1 and H0090: 1.		
HUJDI58	920851	6593	12 - 359	16345		S0114: 1 and H0650: 1.		
HUUAJ10	914330	6594	552 - 764	16346	Ser-13 to Arg-20, Glu-23 to His-28.	H0656: 2, L0749: 2, H0657: 1 and H0264: 1.		
HUUAP82	966685	6595	168 - 650	16347	Cys-14 to His-23, Arg-27 to Arg-45.	H0656: 2 and H0318: 1.		
HUUAS12	968953	6596	3 - 656	16348	Ser-42 to Pro-47.	H0656: 2 and H0486: 1.		
HUUAV06	966816	6597	88 - 396	16349	Gly-1 to Ser-9, Arg-19 to Arg-28, Ala-36 to Gly-43, Ser-73 to Pro-78.	H0656: 2, L0748: 1 and L0757: 1.	22q13.2-q13.31	188826, 250100, 250800, 250800
HUUAV83	921559	6598	80 - 316	16350		H0254: 2 and H0656: 1.		
HUUCI06	933322	6599	115 - 354	16351	Val-39 to Asn-44.	H0656: 1 and S0053: 1.		
HUUCI07	951824	6600	158 - 361	16352		H0656: 2		
HUUCO12	969258	6601	3 - 53	16353		H0656: 2		
HUUCP08	957715	6602	247 - 429	16354		H0656: 2		
HUUCQ03	915269	6603	1 - 585	16355	Thr-40 to Lys-48, Lys-53 to Glu-58, Ser-74 to Ser-80, Phe-82 to Leu-91, Lys-141 to Asp-146, Arg-161 to Asp-167,	H0656: 1, H0581: 1, H0591: 1 and H0521: 1.		

HUUCS49	965987	6604	86 - 502	16356	Asp-177 to Lys-183.	H0656: 2
HUUDG08	957721	6605	148 - 267	16357	Gln-9 to Thr-16, Pro-36 to Glu-52.	H0656: 1 and H0306: 1.
HUUDJ10	961717	6606	420 - 524	16358	Asn-18 to Gly-38.	H0656: 2
HUUDS10	961706	6607	89 - 238	16359		H0650: 1 and H0656: 1.
HWAAE23	675326	6608	497 - 706	16360		H0265: 1, H0556: 1, S0114: 1, H0581: 1, L0532: 1, L0758: 1 and L0599: 1.
HWAAE55	719194	6609	98 - 349	16361	Asp-21 to Gly-26, Leu-50 to Ser-57.	H0370: 1 and H0581: 1.
HWAAE90	778917	6610	87 - 287	16362		H0581: 1 and S0053: 1.
HWAAF27	721151	6611	2 - 313	16363	Asp-28 to Thr-34.	H0485: 1 and H0581: 1.
HWAAF66	908541	6612	3 - 320	16364	Arg-1 to Gly-11, Ser-40 to Asp-46.	AR089: 5, AR061: 2 H0583: 1,,H0581: 1 and H0083: 1.
HWAAF81	712203	6613	177 - 34	16365	Lys-6 to Gly-13.	H0581: 1 and H0457: 1.
HWAAL31	697716	6614	2 - 550	16366	Gly-8 to Trp-13, Pro-34 to Thr-46, Glu-66 to Pro-79, Ala-85 to Ala-100, Gln-102 to Glu-120, Glu-143 to Gln-156, Ser-168 to Ser-177.	H0581: 1 and H0457: 1.
HWAAM04	614973	6615	131 - 295	16367		H0265: 1 and H0581: 1.
HWAAM23	675712	6616	136 - 384	16368		H0635: 1, H0581: 1, L0545: 1, L0748: 1 and L0591: 1.
HWAAR36	915621	6617	195 - 353	16369	Phe-44 to Gln-53.	H0581: 2 and S0116: 1.
HWAAW74	935602	6618	2 - 127	16370	Gln-1 to Gln-7.	H0402: 1 and H0581: 1.
HWAAY03	923734	6619	176 - 373	16371		H0581: 1 and H0423: 1.
HWABA49	859878	6620	83 - 382	16372	Leu-72 to Phe-79.	H0069: 1 and H0581: 1.
HWABB37	870088	6621	2 - 382	16373	Gly-8 to Ala-18, Thr-92 to Thr-100.	H0581: 1 and H0521: 1.
HWABE67	751418	6622	1 - 150	16374		H0581: 2
HWABE94	838096	6623	406 - 182	16375	Val-22 to Gly-36, Pro-48 to His-53.	H0581: 2

HWABF91	698131	6624	64 - 231	16376	Ser-2 to Gly-9.	H0581: 1 and H0422: 1.
HWABI18	529803	6625	38 - 211	16377		S0114: 1, H0581: 1, H0264: 1 and S0053: 1.
HWABQ57	734536	6626	3 - 125	16378	Arg-15 to Tyr-21, Pro-30 to Gln-41.	H0581: 2
HWABS04	494837	6627	15 - 206	16379		H0581: 2, H0625: 1, S0428: 1, H0436: 1 and H0423: 1.
HWABS51	719221	6628	3 - 209	16380		S0116: 1 and H0581: 1.
HWABT82	784211	6629	1 - 117	16381	Phe-13 to Cys-18.	H0581: 2
HWABW02	919441	6630	3 - 212	16382		H0581: 1 and S0052: 1.
HWABW15	659944	6631	561 - 830	16383		H0581: 1 and H0444: 1.
HWABW34	703861	6632	120 - 290	16384	Lys-15 to Pro-20.	H0581: 1 and H0487: 1.
HWABW78	865145	6633	74 - 265	16385	Arg-11 to Cys-16.	H0581: 1 and S0142: 1.
HWABX49	685187	6634	103 - 345	16386	Ser-14 to Lys-31, Pro-41 to Glu-55, Lys-63 to Glu-72.	H0581: 1 and H0522: 1.
HWABX68	752825	6635	119 - 262	16387	Leu-1 to Val-14.	S0114: 1 and H0581: 1.
HWABY12	968857	6636	281 - 577	16388	Asn-8 to Thr-16, Ser-28 to Phe-34, Thr-76 to Gly-85.	H0581: 1 and H0445: 1.
HWACA38	943074	6637	2 - 577	16389	Asp-81 to Ile-89, Asn-112 to Ser-125, Leu-179 to Ser-189.	AR054: 255, AR050: 206, AR051: 141 H0271: 18, H0556: 9, H0265: 8, H0581: 8, L0761: 4, H0543: 4, H0422: 4, H0656: 3, H0457: 3, L0766: 3, T0002: 2, L0748: 2, H0220: 1, H0650: 1, S0282: 1, H0610: 1, H0069: 1, H0635: 1, H0179: 1, H0416: 1, H0031: 1, H0090: 1, T0041: 1, H0560: 1, H0529: 1, L0667: 1, L0649: 1, L0803: 1, L0659: 1, L0666: 1, S0052: 1, S0216: 1, H0702: 1, H0518: 1, H0521: 1.

						1, L0750: 1, H0445: 1, H0423: 1, H0677: 1 and H0506: 1.
HWACB75	685247	6638	273 - 461	16390	Ile-22 to Asn-32, Gly-36 to Asp-49.	S0114: 1 and H0581: 1.
HWACG21	868530	6639	216 - 1	16391		H0581: 2
HWACG64	675517	6640	192 - 356	16392	Arg-38 to Ser-47.	H0581: 2 and L0697: 1.
HWACG68	752710	6641	163 - 351	16393	Arg-41 to Gly-48.	H0581: 2
HWACG94	670912	6642	185 - 322	16394		S0114: 1, H0581: 1 and H0543: 1.
HWACH33	686740	6643	76 - 264	16395		H0581: 1 and S0052: 1.
HWACH49	722572	6644	128 - 349	16396	Pro-8 to Ser-14, Ser-55 to Lys-60.	H0581: 2
HWACK78	753565	6645	31 - 222	16397	Lys-37 to Ala-43.	S0114: 1 and H0581: 1.
HWACM17	662307	6646	2 - 148	16398		H0581: 1 and H0422: 1.
HWACP03	869938	6647	3 - 320	16399		H0581: 1 and H0264: 1.
HWACQ19	668093	6648	193 - 528	16400		H0581: 2
HWACR28	685983	6649	212 - 403	16401		H0581: 3 and H0580: 1.
HWACR77	771777	6650	1 - 117	16402		H0581: 2
HWACU96	787349	6651	116 - 259	16403		H0581: 2
HWACV04	927275	6652	177 - 85	16404	Thr-9 to Leu-15.	H0581: 2 and H0436: 1.
HWACX82	705560	6653	61 - 186	16405		H0581: 1 and S0052: 1.
HWADA93	647703	6654	236 - 493	16406		H0581: 2, L0439: 2, H0318: 1, L0438: 1 and L0748: 1.
HWADE38	709487	6655	327 - 446	16407		H0581: 1 and H0421: 1.
HWADF26	957347	6656	1099 - 506	16408	Ala-45 to Asp-53, Asn-57 to Asp-68, Glu-84 to Cys-92, Asn-97 to Ser-105.	AR050: 78, AR054: 61, AR051: 60, AR061: 2, AR089: 1 H0581: 2, S0114: 1 and L0362: 1.
HWADG01	915567	6657	120 - 350	16409	Asn-25 to Gly-30.	S0114: 1 and H0581: 1.
HWADG26	680182	6658	226 - 423	16410		S0218: 1 and H0581: 1.
HWADG27	958200	6659	300 - 605	16411	Gly-20 to Asp-26.	H0581: 2
HWADI32	698651	6660	154 - 369	16412		H0581: 2
HWADI53	727820	6661	41 - 298	16413	Ala-1 to Tyr-8,	L0748: 3, H0581: 2 and

H0402: 1.

Clone	ID	SEQ	nt range	SEQ	Amino acid features		HID
HWADJ29	690074	6662	109 - 285	16414	Asp-33 to Ser-38.		H0581: 1 and H0444: 1.
HWADL02	918986	6663	48 - 143	16415	Phe-12 to Thr-17.		H0581: 2
HWADL36	706697	6664	38 - 292	16416	Pro-11 to Ile-16, Ile-40 to Cys-51, Gly-62 to Tyr-67.		H0581: 1 and H0521: 1.
HWADM30	868520	6665	97 - 297	16417	Ser-2 to Pro-8, Phe-16 to Cys-22.		S0114: 1 and H0581: 1.
HWADN19	657528	6666	297 - 109	16418	Leu-33 to Lys-50.		H0457: 2 and H0581: 1.
HWADN21	670274	6667	203 - 418	16419	Cys-1 to Arg-6.		H0250: 1 and H0581: 1.
HWADN46	924888	6668	264 - 572	16420			H0271: 2 and H0581: 1.
HWADO54	729136	6669	253 - 393	16421			H0581: 2 and H0264: 1.
HWADP26	680211	6670	3 - 635	16422	Pro-20 to Gln-25, Ser-31 to Cys-36, Leu-39 to Ser-52, Val-64 to Ser-73, Ala-89 to Glu-98, Ser-100 to Glu-109, Val-113 to Gln-119, Lys-146 to Pro-151.		S0114: 1 and H0581: 1.
HWADQ27	682448	6671	444 - 584	16423	Leu-1 to Trp-6.		H0318: 1 and H0581: 1.
HWADQ91	693834	6672	212 - 358	16424			H0581: 2
HWADR47	944042	6673	109 - 252	16425		4	S0212: 1 and H0581: 1.
HWADS43	675454	6674	12 - 185	16426	Tyr-18 to Cys-27.		H0581: 2, L0790: 1 and S0428: 1.
HWADS53	717544	6675	1 - 105	16427	Asp-17 to Asn-23.		H0581: 2, L0805: 1 and H0521: 1.
HWADV51	916669	6676	3 - 326	16428			H0581: 1 and H0436: 1.
HWADV82	708688	6677	251 - 382	16429			H0581: 1 and H0271: 1.
HWADW41	722343	6678	2 - 334	16430	Gly-35 to Thr-40.		H0581: 1, L0743: 1 and H0543: 1.
HWADX46	718647	6679	337 - 570	16431	Glu-1 to Pro-9, Pro-37 to Lys-42.		H0265: 1 and H0581: 1.
HWADX62	868509	6680	218 - 424	16432	Glu-6 to Ser-14, Thr-39 to Gln-45.		H0581: 2 and H0583: 1.
HWADY59	738874	6681	2 - 262	16433	Thr-5 to Lys-17.		H0581: 1, H0063: 1, H0436:

						1, H0444: 1 and L0599: 1.
HWADZ21	670270	6682	2 - 166	16434	Ser-1 to Asn-10.	H0581: 1 and S0142: 1.
HWADZ84	782682	6683	2 - 97	16435		H0581: 2
HWAEA55	731094	6684	28 - 240	16436	Ala-1 to Leu-6.	S0218: 1 and H0581: 1.
HWAEA60	964384	6685	224 - 403	16437	Leu-6 to Gln-15.	H0581: 1 and H0445: 1.
HWAEB19	750811	6686	2 - 154	16438		S0114: 1 and H0581: 1.
HWAEB94	778009	6687	2 - 184	16439	Lys-46 to Glu-60.	H0581: 1 and H0457: 1.
HWAEC75	852921	6688	506 - 709	16440	His-5 to Arg-13, Leu-18 to Leu-23.	H0581: 3, H0318: 2, L0766: 2, L0438: 2, L0439: 2, L0758: 2, H0485: 1, L0451: 1, L0542: 1, L0745: 1 and H0543: 1.
HWAEG01	915064	6689	70 - 168	16441		H0581: 1 and H0444: 1.
HWAEK82	868489	6690	263 - 463	16442		H0581: 2 and H0543: 2.
HWAEN20	868490	6691	119 - 472	16443		H0580: 1, H0581: 1 and L0748: 1.
HWAFD32	850048	6692	43 - 279	16444	Leu-1 to Pro-6, Pro-13 to Glu-18, Gly-51 to Gly-62, Arg-71 to Tyr-79.	H0402: 1 and H0581: 1.
HWAFG08	958173	6693	3 - 149	16445	Asn-23 to His-35.	S0114: 1, H0402: 1 and H0581: 1.
HWAFR09	973926	6694	156 - 341	16446		H0581: 1 and H0090: 1.
HWAFT03	922832	6695	288 - 413	16447		S0134: 1 and H0581: 1.
HWAFW34	926801	6696	6 - 179	16448	Ser-8 to Val-16, Ser-43 to Cys-49.	H0581: 2
HWAFW39	947915	6697	188 - 370	16449		AR089: 2, AR061: 1 H0255: 1 and H0581: 1.
HWAFX39	907631	6698	1 - 369	16450	Asn-36 to Arg-48, His-107 to Tyr-112.	H0581: 1 and H0543: 1.
HWAFY24	868427	6699	113 - 361	16451		H0581: 2
HWAFZ13	873396	6700	74 - 415	16452	Ser-35 to Arg-48, Leu-79 to Asn-88.	H0635: 2, H0581: 1 and H0521: 1.
HWAFZ82	868426	6701	52 - 288	16453	Gly-12 to His-17.	H0581: 2
HWAGC76	941311	6702	52 - 399	16454	Pro-21 to Ala-27, Ala-49 to Ala-56.	S0278: 8, S0344: 5, L0740: 3, H0250: 2, H0581: 2,

HWAGD11	965895	6703	3 - 530	16455	Pro-38 to Lys-44, Arg-64 to Glu-79, Pro-129 to Gly-139, Arg-145 to Pro-151, Pro-154 to Arg-159.	H0457: 2, S0142: 2, L0774: 2, L0749: 2, S0116: 1, H0031: 1, H0063: 1, S0144: 1, S0002: 1, L0800: 1, L0744: 1, L0777: 1 and H0653: 1.
HWAGD58	869383	6704	3 - 224	16456	Lys-39 to Pro-47.	H0581: 1 and H0542: 1.
HWAGE40	926279	6705	2 - 262	16457	Pro-31 to Phe-36, Gln-39 to Gln-45.	H0556: 1, H0581: 1 and L0776: 1.
HWAGG79	930876	6706	32 - 286	16458	Glu-30 to Leu-48, Cys-53 to Ser-60.	H0250: 2 and H0581: 1.
HWAGJ49	838759	6707	357 - 536	16459		H0581: 1 and H0543: 1.
HWAGK95	868403	6708	238 - 441	16460		H0581: 2
HWAGL53	842011	6709	180 - 422	16461	Gly-37 to Leu-42.	H0581: 2 and H0264: 1.
HWAGM33	888685	6710	526 - 1140	16462	Ser-68 to Val-74, Pro-87 to Arg-97, Cys-153 to Trp-164, Arg-172 to Cys-178.	H0581: 1 and H0457: 1.
HWAGX37	959586	6711	390 - 662	16463	Gly-29 to Ser-35.	AR089: 1, AR061: 0 H0305: 1, H0581: 1, L0745: 1 and L0747: 1.
HWAGY05	931001	6712	127 - 369	16464		H0457: 3, H0581: 1 and H0445: 1.
HWAGZ22	868523	6713	70 - 378	16465	Pro-33 to Phe-41, Phe-52 to Cys-58, Pro-88 to Cys-93.	H0264: 2, H0556: 1, H0581: 1 and H0444: 1.
HWAHI10	960646	6714	1344 - 280	16466		H0581: 2, H0224: 1 and H0160: 1.
HWAHS94	909667	6715	1 - 471	16467	Pro-52 to Ser-60, Ala-92 to Gly-102.	H0581: 1 and T0041: 1.
HWAIE02	918215	6716	428 - 607	16468		H0581: 2, H0341: 1, H0521: 1, H0543: 1 and S0452: 1.
HWBAB43	715110	6717	3 - 341	16469	Ile-2 to Asp-8,	H0581: 2 H0580: 1 and H0521: 1.

HWBAB69	582109	6718	2 - 388	16470	Asp-36 to Glu-44, Arg-62 to Leu-67, Arg-74 to Ala-80, Pro-100 to Gly-106. Ser-1 to Thr-16, Lys-27 to Glu-32, Ala-34 to Gly-40, Ala-79 to Gly-88.	H0580: 2, L0748: 1 and S0308: 1.	19q13.3	113900, 126340, 126391, 130410, 134790, 138570, 160900, 173850, 258501, 600040, 602225
HWBAC22	823086	6719	932 - 657	16471	Met-36 to Tyr-44.	H0580: 1 and H0457: 1.		
HWBAL44	959449	6720	566 - 3	16472	Pro-27 to Thr-32, Pro-42 to Trp-48, Asp-109 to Arg-115, Phe-126 to Asp-136, Thr-145 to Lys-151.	H0580: 2, S0002: 2 and L0779: 2.		
HWBAN54	729329	6721	77 - 217	16473	Glu-16 to Phe-23, Leu-35 to Lys-42.	H0580: 1 and H0444: 1.		
HWBAQ16	868363	6722	767 - 925	16474		H0445: 2, H0580: 1, L0761: 1 and L0697: 1.		
HWBAR44	715963	6723	2 - 187	16475	Ala-47 to Asp-52.	H0580: 2 and L0747: 2.		
HWBAR90	788700	6724	427 - 561	16476	Ser-1 to Lys-6.	H0580: 1 and H0416: 1.		
HWBAS92	960197	6725	321 - 575	16477	Asn-1 to His-10, Ala-40 to Ile-45.	H0305: 2, H0580: 1 and L0518: 1.		
HWBAX06	935032	6726	1 - 117	16478	Gly-9 to Gly-21.	H0580: 1 and H0486: 1.		
HWBAX39	630220	6727	282 - 467	16479	Asp-1 to Cys-6.	H0580: 2		
HWBAZ51	707033	6728	246 - 413	16480	Arg-10 to Ser-15, Lys-34 to Pro-41.	H0580: 1 and H0264: 1.		
HWBBA64	927809	6729	120 - 371	16481	Leu-40 to Lys-45.	H0580: 1 and H0264: 1.		
HWBBA83	775401	6730	365 - 571	16482	Gly-22 to Gly-40, Pro-47 to Asn-54.	H0402: 1 and H0580: 1.		
HWBBB48	559708	6731	32 - 250	16483	Gly-13 to Trp-18, Ile-29 to Thr-35, Ala-42 to Ala-52.	H0580: 2		
HWBBE01	851029	6732	107 - 361	16484		H0580: 1 and H0457: 1.		
HWBBF31	868359	6733	3 - 230	16485		H0580: 1 and H0551: 1.		

Clone	Number	SEQ	Range	SEQ ID	Amino acids	Contig	
HWBBI20	669491	6734	34 - 243	16486	Met-1 to Glu-18.	H0580: 2	
HWBBI54	971547	6735	45 - 200	16487	Glu-38 to Lys-45.	H0580: 1 and H0128: 1.	
HWBBL78	723183	6736	294 - 500	16488	Glu-57 to Glu-64.	L0748: 2, H0580: 1, L0171: 1, L0662: 1, S0052: 1 and H0522: 1.	
HWBBM28	686259	6737	177 - 374	16489		S0116: 1 and H0580: 1.	8q24-qter
HWBBO46	718858	6738	428 - 571	16490		H0580: 1, L0748: 1 and H0444: 1.	
HWBBQ40	660971	6739	85 - 282	16491		H0254: 1 and H0580: 1.	
HWBBQ86	656704	6740	10 - 228	16492		S0298: 1 and H0580: 1.	
HWBBR65	747723	6741	32 - 232	16493	Gly-1 to Ser-9.	AR089: 28, AR061: 24 L0748: 2, H0580: 1 and H0421: 1.	
HWBBR78	663728	6742	148 - 354	16494	Asn-30 to Gln-39.	H0580: 1 and H0521: 1.	
HWBBV03	868346	6743	109 - 270	16495		H0402: 1 and H0580: 1.	
HWBBV59	682344	6744	232 - 348	16496	Trp-2 to Asp-11.	H0580: 2	
HWBBV83	771349	6745	3 - 257	16497		H0543: 2 and H0580: 1.	
HWBBW11	966665	6746	1 - 231	16498	Leu-10 to Ser-15, Gly-59 to Gly-66, Arg-72 to Cys-77.	H0402: 1, H0580: 1 and L0055: 1.	
HWBBX08	860880	6747	209 - 580	16499		H0580: 1 and H0271: 1.	
HWBBY01	916036	6748	218 - 436	16500	Leu-33 to Ile-40.	L0766: 2, S0134: 1, H0580: 1, L0060: 1 and L0747: 1.	
HWBBY74	711633	6749	239 - 397	16501	Ser-10 to Pro-21.	H0580: 1 and H0087: 1.	
HWBCA14	768667	6750	231 - 368	16502		H0580: 1 and S0002: 1.	
HWBCA22	674236	6751	209 - 472	16503	Lys-47 to Ser-54.	H0580: 2	
HWBCA92	712731	6752	320 - 442	16504	Lys-1 to Leu-7.	H0580: 1 and H0179: 1.	
HWBCC85	784189	6753	188 - 316	16505	His-1 to Lys-21.	H0580: 2	
HWBCC90	744828	6754	67 - 210	16506		H0580: 2	
HWBCF85	738552	6755	155 - 277	16507		H0580: 1 and H0318: 1.	
HWBCG35	707803	6756	3 - 299	16508	Gly-1 to Ser-12, Leu-19 to Arg-26, Pro-40 to Arg-46, Asp-52 to Asn-61, Arg-65 to Lys-71, Lys-76 to Gly-84.	H0580: 1 and H0090: 1.	

HWBCG45	527679	6757	13 - 177	16509	Pro-17 to Asn-31.	H0305: 2, H0580: 1 and H0576: 1.
HWBCI65	868326	6758	267 - 106	16510	Pro-18 to Lys-41.	H0580: 2
HWBCN09	868325	6759	141 - 347	16511		H0580: 1 and H0635: 1.
HWBCN55	715064	6760	63 - 326	16512	Arg-25 to Asn-32.	H0580: 1 and H0581: 1.
HWBCQ10	964233	6761	195 - 377	16513	Tyr-45 to Lys-51.	H0580: 1, H0581: 1 and L0529: 1.
HWBCQ29	943720	6762	9 - 251	16514	Pro-14 to Met-22, Lys-25 to Ile-31, Ala-55 to His-65, Thr-74 to Lys-81.	AR089: 1, AR061: 1 H0580: 1, H0416: 1 and H0521: 1.
HWBCS21	960025	6763	148 - 513	16515	Pro-1 to Lys-12, Pro-30 to Gln-35.	S0114: 1 and H0580: 1.
HWBCS66	765986	6764	545 - 727	16516	Asp-10 to Gly-18.	H0186: 1 and H0580: 1.
HWBCU82	955858	6765	176 - 382	16517	His-11 to Pro-19.	H0271: 2 and H0580: 1.
HWBCW04	925649	6766	302 - 541	16518		H0580: 1 and H0445: 1.
HWBCW88	882592	6767	283 - 636	16519	Lys-21 to Pro-44, Ser-61 to Arg-67, Asn-70 to His-75.	L0731: 5, L0779: 3, L0777: 2, H0580: 1, S0344: 1, L0768: 1, L0751: 1, L0745: 1, L0747: 1 and L0759: 1.
HWBCW90	731395	6768	142 - 282	16520	Ser-5 to Asn-10.	H0580: 3
HWBCY30	828318	6769	3 - 476	16521	His-1 to Asp-20, Pro-52 to Phe-57, Gly-64 to Glu-75.	H0580: 1, H0090: 1, L0662: 1, L0766: 1, L0776: 1, L0792: 1, L0740: 1, L0777: 1 and L0752: 1.
HWBDL50	724145	6770	301 - 513	16522		H0580: 1, H0581: 1 and H0271: 1.
HWBDM24	963498	6771	741 - 1040	16523		H0521: 2, H0580: 1 and H0522: 1.
HWBDP31	697705	6772	136 - 426	16524	Asp-11 to Leu-16, Trp-35 to Leu-41, Arg-54 to Pro-60.	H0580: 2
HWBDR66	750586	6773	370 - 522	16525	Thr-4 to Leu-29, Tyr-42 to Gly-48.	H0580: 2
HWBDS89	771950	6774	76 - 270	16526		H0580: 2
HWBDT15	659939	6775	62 - 184	16527		H0580: 1 and S0052: 1.

Clone	Number	Range	SEQ ID	Description	Library	Map	OMIM
HWBDW71	597259	313 - 438	16528		H0580: 2		
HWBEA72	950702	3 - 203	16529		H0580: 2		
HWBEI17	924913	3 - 182	16530		S0116: 1 and H0580: 1.		
HWBEJ53	968493	26 - 118	16531		H0580: 1 and H0271: 1.		
HWBEL53	727617	123 - 287	16532		H0580: 2		
HWBEL70	735390	169 - 456	16533	Asp-1 to Gly-6.	H0580: 2		
HWBEL85	954600	46 - 204	16534		H0580: 2 and H0179: 1.		
HWBEV44	716215	43 - 195	16535	Asn-10 to Gln-15, Glu-31 to Phe-37.	H0580: 2 and L0740: 1.		
HWBEV94	788574	166 - 2	16536	Gly-2 to Pro-12, Gly-48 to Met-54.	H0580: 2	15q15	
HWBEX27	682583	1 - 489	16537	Leu-5 to His-12.	AR089: 1, AR061: 0 H0580: 2, L0663: 2, L0662: 1, L0657: 1, L0659: 1, L0666: 1, L0438: 1, L0748: 1 and L0777: 1.		177070, 177070, 182500, 218000, 227220, 243500, 600839, 601800
HWBEY38	709497	226 - 366	16538		H0580: 1 and H0069: 1.		
HWBEZ47	719940	2 - 160	16539		H0580: 2		
HWBEZ69	664699	127 - 345	16540		H0580: 1, H0264: 1 and H0625: 1.		
HWBEZ90	923008	181 - 336	16541	Asn-9 to Cys-14.	H0580: 2, L0775: 2 and H0521: 2.		
HWBEZ94	856472	188 - 340	16542		H0580: 1, L0521: 1 and H0445: 1.		
HWBFE76	769769	310 - 420	16543	Tyr-1 to Lys-6, Gly-20 to Trp-33.	H0580: 2		
HWBFG09	625162	1 - 195	16544	Pro-13 to Gly-20.	H0580: 2		
HWBFL35	722921	173 - 328	16545	Arg-8 to Arg-22, Asp-28 to Lys-34.	H0580: 2		
HWBFL96	708955	155 - 406	16546	Gln-15 to Glu-22.	H0580: 2		
HWBFM58	735701	1 - 162	16547		H0580: 2		
HWBFM78	773289	117 - 365	16548	Ser-17 to Gly-29, Arg-35 to Ala-42.	H0580: 2		
HWBFN30	691611	188 - 3	16549	Ser-4 to Lys-9.	H0580: 2		
HWBFY69	754729	135 - 257	16550		H0580: 2		

Clone	No.	Residues	SEQ ID	Amino acids	Codes	Chr.	References
HWBFY88	701904	1 - 111	16551	Thr-16 to Glu-21.	H0580: 2		
HWBGB08	958611	1 - 84	16552		H0580: 1 and H0522: 1.		
HWBGB47	948714	2 - 124	16553	.	H0580: 2		
HWBGD16	924830	102 - 302	16554		H0580: 1 and H0477: 1.	10q26	176943, 176943, 176943, 176943, 258870, 263700, 601969, 601969, 602084
HWBGF15	659687	17 - 220	16555		H0265: 1 and H0580: 1.		
HWBGI01	915603	23 - 178	16556		H0580: 1 and H0370: 1.		
HWBGI13	656308	55 - 276	16557	Ser-25 to Ser-30.	H0580: 2		
HWBGI30	691511	105 - 266	16558		H0580: 2		
HWWAZ06	933736	1 - 213	16559		H0318: 3, S0134: 1, S0218: 1, H0657: 1 and L0758: 1.		
HWWDI03	922463	113 - 301	16560	Val-7 to Leu-22, Cys-26 to Met-34, Gly-57 to Ser-63.	H0657: 2, H0255: 1 and H0318: 1.		
HWWEF06	933697	3 - 128	16561	Gln-24 to Ile-30.	H0657: 2, L0770: 1, L0774: 1, L0666: 1, L0439: 1 and L0777: 1.		
HWWEN10	961741	122 - 436	16562	Pro-9 to Ile-14.	H0657: 2, L0532: 1 and L0666: 1.		
HWWEP56	951811	157 - 426	16563		H0657: 2, L0779: 2, L0766: 1 and L0655: 1.		
HWWFA12	968958	151 - 285	16564	Lys-8 to Gly-19, Gly-37 to Arg-45.	H0657: 1, H0318: 1 and H0445: 1.		
HWWFK07	951819	39 - 503	16565	Val-42 to Leu-56.	H0657: 3 and H0521: 1.		
HWWFU42	961739	44 - 247	16566	Pro-17 to His-23.	H0657: 2		
HYAAB66	463413	62 - 325	16567		H0583: 1 and H0422: 1.		
HYAAC60	731763	349 - 552	16568	Leu-22 to Gln-29, Phe-31 to Ala-37.	S0218: 1 and H0583: 1.		
HYAAD03	923797	229 - 336	16569		H0583: 2		
HYAAD67	664597	67 - 180	16570		H0583: 2 and S0052: 1.		
HYAAD95	920280	299 - 625	16571	Lys-14 to Tyr-31, Pro-39 to Phe-45, Trp-86 to Ala-92.	H0318: 7, H0445: 7, L0748: 6, L0766: 4, H0657: 3, L0751: 3, H0423: 3, H0583:		

HYAAF33	915050	6820	136 - 396	16572	Ser-50 to Thr-58, Thr-64 to Gly-72.	2, H0477: 2, L0761: 2, L0794: 2, L0758: 2, L0599: 2, S0114: 1, L0785: 1, H0254: 1, H0402: 1, H0486: 1, H0575: 1, H0421: 1, H0264: 1, H0059: 1, L0767: 1, L0768: 1 and L0655: 1.
HYAAH26	681251	6821	99 - 224	16573	Asn-19 to Tyr-28.	H0583: 1, L0766: 1 and H0522: 1.
HYAAH36	947242	6822	47 - 241	16574	Arg-44 to Cys-50.	H0583: 1 and H0318: 1.
HYAAI55	674591	6823	19 - 141	16575		H0583: 2
HYAAI67	706512	6824	233 - 3	16576	His-2 to Trp-7, Glu-37 to Asn-43.	L0748: 2, S0114: 1 and H0583: 1.
HYAAJ36	744792	6825	1 - 414	16577	Ala-1 to Gly-6.	H0583: 1 and H0305: 1.
HYAAJ89	678728	6826	137 - 283	16578		H0583: 1, H0521: 1, L0779: 1 and L0758: 1.
HYAAN31	697590	6827	2 - 181	16579	Gly-20 to Trp-33.	H0583: 1 and H0179: 1.
HYAAO39	599000	6828	242 - 412	16580		H0583: 2
HYAAR17	662426	6829	2 - 223	16581		H0583: 1 and S0002: 1.
HYAAR95	862585	6830	252 - 536	16582	Ile-20 to Lys-25.	H0583: 1, S0002: 1, L0766: 1 and H0423: 1.
HYAAS08	926017	6831	1 - 312	16583	Arg-1 to Phe-18, Pro-38 to Phe-43.	H0583: 1 and H0341: 1.
HYAAT50	724047	6832	42 - 413	16584	Ile-3 to Ala-11, Arg-25 to Leu-32, Ser-40 to Cys-47, Leu-101 to Lys-111.	S0134: 1 and H0583: 1.
HYAAU42	890595	6833	2 - 424	16585	Ser-37 to His-43, Val-45 to Trp-60, Lys-106 to Ser-113.	H0583: 1, L0539: 1 and H0271: 1.
HYAAU88	786666	6834	125 - 430	16586	His-1 to Glu-8, Asp-14 to Cys-21.	S0218: 1, H0583: 1 and S0216: 1.
HYAAX05	934878	6835	23 - 190	16587		H0583: 2
HYAAX17	662439	6836	3 - 140	16588		H0583: 2

HYAAX65	630213	6837	2 - 217	16589	Gly-1 to Trp-13.	H0583: 2		
HYAAY36	766694	6838	110 - 412	16590	Pro-1 to His-11, Ser-52 to Ala-60.	H0556: 6, S0144: 5, H0255: 4, L0766: 4, L0757: 4, H0650: 3, S0278: 3, H0486: 3, S0344: 3, S0426: 3, L0655: 3, L0747: 3, L0749: 3, H0543: 3, S0134: 2, L0785: 2, H0069: 2, H0318: 2, H0179: 2, L0748: 2, L0756: 2, T0002: 1, H0583: 1, S0116: 1, H0402: 1, H0638: 1, S0358: 1, S0140: 1, H0025: 1, H0575: 1, H0581: 1, H0510: 1, H0271: 1, H0063: 1, H0087: 1, L0381: 1, L0378: 1, L0657: 1, L0659: 1, L0542: 1, L0383: 1, H0521: 1, H0436: 1, L0779: 1, S0027: 1, L0744: 1, L0779: 1, L0731: 1, H0445: 1, L0601: 1, H0422: 1 and H0677: 1.	22q13.1	103050, 103050, 124030, 124030, 138981, 182380, 188826, 190040, 190040, 190040
HYAABB23	675659	6839	302 - 448	16591		L0754: 3, L0803: 2, L0517: 2, L0362: 2, H0583: 1, L0773: 1, L0662: 1, H0521: 1 and L0780: 1.	2q12	129490, 167415, 176947
HYAABB40	799572	6840	288 - 545	16592	Phe-20 to Ser-29.	L0766: 2, L0747: 2, L0779: 2, L0777: 2, L0755: 2, H0583: 1, S0116: 1, L0800: 1, L0644: 1, L0626: 1, L0375: 1, L0776: 1, L0792: 1, L0663: 1, L0748: 1, L0758: 1, L0593: 1 and H0423: 1.		
HYAABB96	692653	6841	3 - 170	16593	Ser-1 to Cys-14, Arg-20 to Lys-31, Leu-34 to Thr-46.	H0583: 1 and H0521: 1.	8	

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HYABC02	919212	6842	3 - 179	16594	Tyr-1 to Thr-10, Thr-15 to Cys-21, Glu-29 to Trp-34.	H0583: 2
HYABC58	924677	6843	92 - 202	16595	Asn-1 to Tyr-9.	H0583: 1 and H0063: 1.
HYABE67	822985	6844	94 - 315	16596	Arg-11 to His-21, Tyr-46 to Gly-54.	H0583: 3 and L0754: 1.
HYABE85	697593	6845	447 - 635	16597		H0583: 2, L0764: 1 and L0439: 1.
HYABG22	811950	6846	3 - 146	16598		H0583: 2
HYABL55	678864	6847	2 - 418	16599	Thr-12 to Thr-28, Glu-30 to Ala-36, Gly-40 to Arg-48, Ala-61 to Trp-75, Arg-94 to Gln-101, Thr-112 to Asp-117.	H0583: 1 and S0052: 1.
HYABP53	971448	6848	26 - 637	16600	His-1 to Gly-12, His-33 to Gly-44, Thr-124 to Gly-137, Thr-153 to Thr-158, Arg-188 to Gly-193.	AR054: 47, AR051: 42, AR050: 39, AR089: 1, AR061: 1 H0583: 1 and H0656: 1.
HYABV14	956236	6849	121 - 588	16601	His-1 to Trp-12, Arg-40 to Ala-45, Pro-50 to His-60, Asn-70 to Arg-76.	H0521: 4, L0766: 3, H0583: 1, H0581: 1, H0522: 1 and H0543: 1.
HYACG89	724923	6850	231 - 512	16602		S0114: 1, L0002: 1 and H0583: 1.
HYACI15	674268	6851	149 - 277	16603	Ser-21 to Gly-26.	H0583: 1 and H0576: 1.
HYACI18	665720	6852	122 - 292	16604	His-25 to Lys-32.	H0583: 1, S0002: 1 and L0748: 1.
HYACI64	929756	6853	299 - 523	16605	Ser-28 to Pro-33.	H0583: 1 and H0423: 1.
HYACI95	746317	6854	3 - 284	16606	Gly-1 to His-10, Pro-13 to Arg-21, His-39 to Cys-53, Ser-79 to Lys-92.	H0583: 2
HYACI53	727948	6855	214 - 375	16607	Gln-1 to Ser-6.	L0748: 4 and H0583: 1.
HYACF71	760102	6856	275 - 565	16608	Pro-27 to Arg-38.	L0439: 2 and H0583: 1.

HYACE11	966482	74 - 229	16609	Gly-1 to Gly-7, Gln-36 to Leu-45.	H0583: 1 and L0517: 1.
HYACD06	974495	145 - 384	16610	Leu-10 to Tyr-28, Arg-39 to Lys-44.	H0583: 1
HYACC03	923525	199 - 462	16611	Pro-24 to Ser-29, Ser-45 to Glu-50.	H0583: 1 and L0589: 1.
HYABB43	800006	368 - 21	16612	Lys-16 to Arg-21, Ser-44 to Arg-52.	AR050: 136, AR054: 109, AR051: 95, AR089: 1, AR061: 1 L0805: 2, H0583: 1, L0764: 1, L0375: 1, L0776: 1, L0740: 1, L0731: 1 and L0759: 1.
HYAAY57	734463	347 - 430	16613		H0583: 1 and L0439: 1.
HYAAV45	717479	360 - 542	16614	Ala-18 to Glu-26.	H0583: 1 and L0749: 1.
HYAAU65	909956	2 - 580	16615	Gln-68 to Ser-78, Thr-93 to Ser-101, Pro-119 to Ala-130.	AR089: 2, AR061: 1 L0748: 2 and H0583: 1.
HYAAT55	731420	3 - 233	16616		H0583: 1 and L0748: 1.
HYAAT39	929758	392 - 186	16617		L0754: 2 and H0583: 1.
HYAAN84	782838	164 - 364	16618	Ser-30 to Arg-39.	H0583: 1, L0759: 1 and L0589: 1.
HYAAL49	973089	115 - 300	16619	Val-13 to Gln-19, His-35 to Gly-42.	H0583: 1
HYAAL41	887395	3 - 257	16620		AR050: 73, AR054: 55, AR051: 52 H0583: 1
HYAAL19	668338	517 - 738	16621	Met-15 to Asn-21, Ser-36 to Ser-41.	L0439: 4, L0756: 2, L0594: 2, H0583: 1, L0766: 1, L0438: 1, L0779: 1 and L0758: 1.
HYAAK77	887044	212 - 727	16622		AR054: 69, AR050: 62, AR051: 57 H0583: 1 and L0745: 1.
HYAAK74	765252	1 - 177	16623	Cys-1 to Arg-12.	H0583: 1, L0748: 1 and L0749: 1.

Clone	No.	ID	Range	SEQ	Amino acids	Designation	
HYAAJ03	923526	6872	148 - 279	16624	Glu-26 to Cys-31.	H0583: 1 and L0777: 1.	
HYAAF78	773433	6873	1 - 219	16625	Arg-17 to Asn-23, Ser-43 to Ile-48.	H0583: 1, L0748: 1 and L0754: 1.	
HYAAD24	677019	6874	2 - 157	16626		H0583: 1 and L0748: 1.	
HYAAC24	677010	6875	186 - 389	16627	Glu-21 to Tyr-31, Lys-58 to Lys-64.	H0583: 1 and L0362: 1.	
HYAAB40	841969	6876	268 - 510	16628	Ile-15 to Ser-20.	H0583: 1 and L0717: 1.	
HWWEW11	965434	6877	298 - 471	16629	Gly-1 to Gly-29.	H0657: 1 and L0664: 1.	
HWWEL11	965426	6878	204 - 374	16630	Ser-1 to Leu-8.	H0657: 1 and L0367: 1.	
HWWEC06	933690	6879	85 - 234	16631	Ser-33 to Gly-43.	L0766: 2, H0657: 1 and L0749: 1.	
HWBGG82	779081	6880	377 - 538	16632		H0580: 1, L0745: 1 and L0600: 1.	
HWBGF04	927284	6881	1 - 489	16633		H0580: 1 and L0750: 1.	
HWBFY46	800638	6882	1 - 270	16634	Arg-5 to Arg-14.	AR054: 2, AR050: 2, AR051: 1 H0580: 1	
HWBEG18	909798	6883	55 - 696	16635	Trp-46 to Lys-51, Pro-109 to Asn-123, Phe-156 to Gly-165.	AR089: 82, AR061: 18 H0580: 1	
HWBEF69	754328	6884	324 - 229	16636		H0580: 1 and L0748: 1.	
HWBEE25	677660	6885	534 - 316	16637		H0580: 1 and L0742: 1.	
HWBEA06	934820	6886	31 - 237	16638	Gln-26 to Ser-31, Pro-34 to Gln-40.	H0580: 1 and L0766: 1.	
HWBDU71	835888	6887	418 - 531	16639		H0580: 1 and L0523: 1.	
HWBDU58	735774	6888	490 - 257	16640	Ser-18 to Asn-23, Thr-30 to Thr-41, Pro-63 to Arg-75.	L0439: 3 and H0580: 1.	
HWBDS59	743462	6889	274 - 447	16641	Pro-11 to Thr-20.	L0749: 2, H0580: 1 and L0747: 1.	22q11.2-qter
HWBDS12	971872	6890	3 - 200	16642	Ile-17 to Glu-37.	H0580: 1, L0775: 1 and L0755: 1.	
HWBDR82	779002	6891	153 - 437	16643	Phe-1 to Arg-13, Ser-21 to Gln-32.	H0580: 1 and L0748: 1.	
HWBDQ58	735769	6892	553 - 744	16644		L0748: 2 and H0580: 1.	
HWBDL82	728805	6893	26 - 355	16645	Pro-64 to Ile-75,	L0439: 2 and H0580: 1.	

				Glu-77 to Asp-88, Leu-101 to Gly-110.	
HWBDK08	958956	6894	247 - 369	Pro-15 to Gly-22.	H0580: 1, L0665: 1 and L0599: 1.
HWBCV48	721010	6895	136 - 408	Gly-7 to Ser-13, Pro-36 to Phe-46.	H0580: 1 and L0766: 1.
HWBCU06	935028	6896	240 - 464	Glu-1 to Pro-11.	H0580: 1 and L0143: 1.
HWBCS08	909031	6897	2 - 562	Cys-1 to Arg-6, Asp-18 to Ser-30, Cys-37 to Ser-42, Arg-64 to Lys-69, Arg-74 to Val-79, Asp-109 to Asp-115, Val-161 to Lys-166.	AR089: 4, AR061: 1 H0580: 1, L0809: 1 and L0604: 1.
HWBCH41	868342	6898	175 - 363		H0580: 1, L0766: 1 and L0748: 1.
HWBCD20	669472	6899	143 - 418	Arg-3 to Ser-17, Pro-33 to Ala-41.	H0580: 1 and L0439: 1.
HWBCA08	958957	6900	1 - 222	Cys-3 to Ser-10.	L0619: 1 and H0580: 1.
HWBBY86	637734	6901	198 - 503	Ser-8 to Gly-13, Pro-33 to Ser-39, Asn-96 to Gln-102.	AR051: 12, AR054: 7, AR050: 3 H0580: 1
	785151	9611	362 - 3	Ser-8 to Gly-13, Pro-33 to Ser-39, Asn-96 to Lys-101.	
HWBBV52	726509	6902	78 - 218	Leu-9 to Met-17.	H0580: 1, L0740: 1 and L0599: 1.
HWBBU10	964237	6903	8 - 298	Pro-24 to Cys-42, Arg-66 to Pro-71.	L0004: 1, H0580: 1 and L0606: 1.
HWBBT71	760176	6904	247 - 381	His-2 to Gly-8.	H0580: 1 and L0756: 1.
HWBBR45	887686	6905	75 - 239	Leu-4 to Asp-15.	AR054: 240, AR050: 238, AR051: 165 H0580: 1
HWBBQ22	861613	6906	2 - 214	Tyr-17 to Cys-22.	H0580: 1 and L0766: 1.
HWBBN86	785313	6907	385 - 528		L0748: 3 and H0580: 1.
HWBBM02	919423	6908	3 - 116		H0580: 1 and L0376: 1.